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ORIGINAL ARTICLES.

VOLVULUS.

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Volvulus signifies the twisting of a loop of bowel around its mesenteric axis. Also two loops of bowel could twist around each other.

Sixty per cent. of volvulus occurs at the sigmoid flexure; thirty per cent. occurs at the cecum and ten per cent. occurs in the small intestine.

The cause of volvulus is—(*a*), an elongated mesentery, (*b*), a fatless mesentery, and (*c*), constipation.

Volvulus occurs in males four times as often as in females. This is a curious fact as females are generally more constipated than males. But I suggest that the mesentery of females is longer than that of males.

Volvulus constitutes about $\frac{1}{25}$, or 4 per cent., of all intestinal obstruction. The average age at which it occurs is 50 years—a time when constipation is prevalent and the mesentery is most elongated and fatless.

I have performed many experiments on dogs and human cadavers, and on the intestines of other animals, in order to learn how a volvulus was produced. The first experiments were done on dogs. The abdomen was opened and loops of intestine were drawn out and twisted on the mesenteric axis. The volvulus would always untwist if it was not sutured. After considerable trial, even with the twisted bowel fixed in place by sutures passed through the mesentery, I could not keep a volvulus in its original twist in the living dog. If I wound the omentum around the twisted loop, the dog having recovered in a couple of days, on killing him the volvulus was found untwisted. In one large dog I opened the abdomen, drew out a loop of bowel, twisted it around its mesenteric axis four times and sutured it to the mesentery and omentum. In two weeks after the operation I killed the dog, the volvulus was found reduced but, in reducing, the volvulus had formed two omental bands, one $2\frac{1}{2}$ inches, the other 6 inches long. These bands had been formed out of the omentum as the volvulus had unrolled. They would serve for traps to strangulate the bowel. Other bands also formed but were mostly absorbed. In human cadavers with elongated mesenteries we have forced the feces into the sigmoid with an elongated mesentary. Now if further attempt would be made to force fluid through the sigmoid, the weight of the feces seemed to aid in the tightening of the bowel and obstructing the passage. There is no doubt that volvulus is retained and made worse by some sigmoids having mesenteries allowing masses of feces to get into the middle of the loop and by its very weight, when, the sigmoid was twisted, make it unable to regain its normal position. The intestines of calves were experimented on to produce a volvulus but not much light was thrownon the matter. Calves intestines are very long and so coiled on the mesenteric edge so that it looked at first as if one could be made by injecting water. But

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the peculiar mechanism of the mesenteric attachment to the intestines always allows the bowel loops to escape being caught.

Volvulus in a human being generally comes on suddenly without any previous history. Its first appearance is accompanied by *pain*. The *pain* is not so severe as in complete sudden constriction of the bowel. It is generally periodic until the twist completely obstructs the bowel. Complete bowel obstruction gives rise to constant pain. The more suddenly he volvulus occurs the more violent is the ain. The pain is generally local and referred. The referred pain is near the umbilicus or abdominal brain. Opium quiets the peristalsis and masks the symptoms.

Vomiting is not so conspicuous a feature as in sudden complete obstruction, but it occurs in various degrees in most of the cases. Tympanites is one of the peculiar features of volvulus. The abdomen becomes rapidly distended and drum-like. The tympanites is due to a reflex paralysis. The irritation from the seat of the volvulus is carried to the abdominal brain by way of the inferior mesenteric plexus (from the sigmoid) when it is reorganized and sent out to all the digestive tract. The irritation on reaching the gut wall paralyzes the plexus and thus renders the gut wall flaccid. The irritation then proceeds to the next plexus just under the mucous membrane, known as Meissner's plexus. This plexus controls secretion. The irritation deranges the plexus so that it secretes excessively, deficiently or disproportionately. The deranged secretion induces fermentation which ends in the production of gases. Thus, according to my views, is explained the enormous tympanites in volvulus. A certain degree of irritation, not too severely infective, is what causes tympanites by reflex paralysis. If there be too much infection, as suppurative peritonitis, no tympanites occurs. The abdomen is flat.

The *shock* of volvulus depends on the amount of nerve traumatism. The effect of shock is by means of the sympathetic nerve centers—especially the abdominal brain. The objective symptoms are a profound, grave and violent change in the vascular system. The red blood leaves the surface. The effect will depend on (a), the individual constitution (b), on the amount of visceral nerve traumatism and (c), on the suddenness of the attack. The main idea is the amount of damage inflicted on the peritoneal and visceral nerves.

Volvulus is a rapid and dangerous affection. It frequently kills, if not relieved, in six days. We do not possess sufficient knowledge at present to assert that a volvulus once formed, ever reduces itself. In fact, many cases of volvulus on being formed have a kind of spiral spring, which aids in retaining them and prevents untwisting. It is very difficult to diagnose volvulus without exploration, but its indications are amply sufficient to do laparotomy. Constipation is absolute from the beginning. In operating for volvulus, the hand should first be passed to the sigmoid flexure, as 60 per cent. occur there. It should then pass to the cecum, as 30 per cent. occur there. If the volvulus is difficult to unwind, it should be so sutured to the abdominal wall that it cannot recur. If it cannot be reduced at all (as has happened) one should anastomose the gut above to that below the volvulus with the author's segmental rubber plates or with Murphy's button.

In autopsies of humans I have found volvulus of the cecum, but was unable to say whether it was sufficient to disturb normal life or not. Very brilliant results may be gained by early laparotomy in volvulus, but left alone it is nearly always fatal.

Passed With Honors.

Examining Medical Professor—Now, sir, tell me how you would treat a case of typhoid fever.

Student—Well, sir, I should first—I should first—I—

E. M. P. (impatiently)—Yes, yes; go on.

Student (seized with a brilliant idea)—I should first call you in for consultation.

Passes with honors.—*Tid-Bits.*

"The paths of pain are thine. Go forth
With patience, trust, and hope;
The sufferings of a sin-sick earth
Shall give thee ample scope.
Beside the unveiled mysteries
Of life and death go stand,
With guarded lip and reverent eyes,
And pure of heart and hand."

—*Whittier.*

CLINICAL LECTURES.

SPONTANEOUS EPISTAXIS.

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Spontaneous epistaxis is perhaps, one of the most annoying ailments that the practitioner of medicine is called upon to treat, because, as a rule, it occurs during the night when the patient is most easily alarmed at a copious flow of blood from the nose, and sends for the doctor without giving him information as to what he may prepare himself for. I speak from experience, as I have been called out of bed many and many a night on such an errand. I have in times past tried the different methods mentioned in the well-worn textbooks, such as plugging the nasal chambers, both anteriorily and posteriorly, with anything at hand, bed feathers, rags, sponges, and what not, only to find that the patient, although the flow of blood was stopped for the time being, was uncomfortable, and that the epistaxis recurred with renewed vigor as soon as the plugs were removed. Shortly before the late Dr. Agnew, our venerable Nestor of Surgery in this country, died, he told me that he had found a piece of ham fat to be one of the best, if not the best material, with which to arrest nasal hemorrhage, and reasoning from the pathological condition producing the hemorrhage, unlike cotton or feathers or linen rags are materials which, owing to their filamentous constitution allow the new-formed vessels of granular tissue to entwine themselves in their fibres, and on removal of the plugs a portion of these newly-formed capillaries are torn off and, consequently, bleeding starts afresh. The ham fat, on the other hand, exerts an even pressure, allows the granular tissue to form, but presents no crevices or attachments for the embryonic capillaries, so that on its removal the bleeding is not likely to immediately ensue. This reasoning borne of an intimate knowledge of histology, pathology and of a minute anatomy of the nasal chambers led me to search for the origin and original cause of idiopathic epistaxis, and my researches proved that spontaneous nose-bleeding is invariably caused by an abrasion of the mucous membrane of the septum, which causes an accumulation and drying up of the natural nasal secretion so that a scab of dried mucous covers the abraded spot under whose protection the natural process of repair goes on in the form of granulation of tissue, and the new formation of healthy mucous membrane with its epithelial covering.

If now this protecting scab is prematurely removed by scratching or too forcible blowing of the nose the capillaries of this granulating tissue not as yet having attained maturity or protection by epithelium pours out the blood which is supplied to them by the arteriols.

Having theoretically arrived at this conclusion as to the cause of spontaneous epistaxis I reasoned further and the theory arrived at is, that the immature or embryonic capillaries of granulating tissue having no muscular walls, and being as they are, mere channels without limiting walls between the masses of granulation cells have not the power to contract and, therefore, if opened, bleed, which was proved by experience, for I found in a large number of cases that the simple scooping away of the granulating tissue at the seat of the abrasion, until arteriols and capillaries were reached stopped all further hemorrhage, and the subsequent application to the spot of a strong solution of nitrate of silver (2 drachms to the ounce) formed a sufficiently strong and adherent covering to allow the full development of healthy mucous membrane to cover the original abrasion.

It is, however, no easy matter, in fact impossible to detect this granulating tissue in one or the other of the anterior nasal cavities while the flow of blood goes on, and obscures everything within the cavity so that it is necessary as a preliminary step to check the flow of blood.

As stated above I found Dr. Agnew's ham fat superior to anything I had used before but this material is not always at hand when wanted, and I substituted for it a substance known as spunk which is made of the fungi which grow like shelves on beech and maple trees and is used in

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this country mostly by dentists as the best absorbant of moisture, for drying cavities of teeth before filling. Even that although far superior to ham fat, owing to the fact that when saturated with any fluid such as blood it swells to thrice its size, thereby exerting pressure and does not present the porous surface for the entanglement of the newly-formed capillaries just like the ham fat has the great disadvantage common to all plugs that it fills up the nasal chamber into which it is introduced, allows the blood to flow backward into the posterior nasal cavity and around forward through the other nasal chamber so that this also must be plugged up tight and both plugs have to remain until the surgeon can again visit his patient and remove them.

To avoid this difficulty and annoying waste of time on the part of the surgeon I have for the last few years employed a wire clamp, which is nothing more or less than a patent clothes-pin made of wire, slightly modified to suit the purpose for which it is to be used, and of which the accompaning cut gives a fair representation.

This *epistaxis clamp* is nothing but a piece of wire, moderately stout, twisted at its upper end into a ring which gives the necessary pressure to the extremities by its spring. The shanks of the clamp are bent in such a fashion that they separate near the ring, but come close together at their elbows, which latter are furnished with metal plates for the purpose of preventing the sharp point of the elbow from producing unnecessary pain when applied. Immediately below these plates the shanks are bent outward at a sharp angle for the purpose of giving the necessary hold to the finger of the surgeon applying the instrument. When this instrument is to be used the bleeding spot should be determined as nearly as possible. A pad of absorbent cotton, covered by a bandage or strip of muslin or other material should be placed over the bridge of the nose below the nasal bone like a saddle is placed on a horse, and the clamp adjusted in such a way over the pad or saddle that by its spring action it presses the alæ of the nose against the cartilapinous portion of the septum on either side thus effectually and completely closing the external opening of the anterior nasal cavities. If then a backward flow into the posterior nasal cavity takes place all that is necessary to stop this is to enjoin the patient to lay on his stomach and hang his head over the edge of the bed until the blood has coagulated and formed a sufficiently consistent clot to act as a plug posteriorly. Of course he should also be told not to "hawk" because that action of the soft palate loosens the clot, and he should be told to simply spit out the blood as it flows down on the back of the tongue which it must do if he maintains the above described position.

Perhaps one of the greatest advantages of this little device is that the patient himself can remove the anterior nasal obstruction as it is produced from without, and cleanse the one anterior nasal chamber, thus enjoying the comfort of nasal respiration. If, however, he in his distress should have been tempted to remove the clamp before the blood clot on the bleeding side has attained the necessary consistency to stop the bleeding of the embryonic capillaries by its pressure and the epistaxis recurs he or his nurse can easily reapply the clamp.

After the lapse of from fifteen to twenty-four hours the clot may be removed by gently drawing it out with a pair of forceps and the abrasion can be seen after the anterior nasal cavity has been properly illuminated. It is usually the case that we find a little oozing from the spot and it is by means of this that the surgeon is enabled accurately to locate it. All that is necessary then is to scrape away the granulation tissue until the matured arteriols are reached which having sufficient contractile power in their muscular coats to close their lumen and thus stop the oozing, and the subsequent application by means of a cotton wad or camel's hair brush to the abrasion of the above mentioned nitrate of silver solution to prevent any further recurrence of the nasal hemorrhage. Of course this method is applicable only in those cases of ordinary idiopathic epistaxis, but will not answer in those cases which depend either upon the systematic disease such as phthisis, tuberculosis, lupus and typhoid fever, or in which the hemorrhage is caused by nasal polypi, or finally in the rare examples of hæmophelia.

COMMUNICATIONS.

MULTIPLE CYSTOMAS OF THE LIVER TREATED BY INCISION AND EVACUTION.*

JOHN B. ROBERTS, A. M., M. D., PHILADELPHIA.

A German woman, fifty-six years of age, was admitted to the Woman's Hospital on October 2, 1893. For ten years she had noticed a swelling, in the right side of the abdomen below the ribs, which for about one year had been somewhat painful. She had always been a healthy woman and had borne seven children. The menopause had been established ten years previous to her admission. One week before entering the hospital she began to suffer with dyspnœa and cough, accompanied by constipation and fever.

Physical exploration of the chest by the hospital physicians showed some dulness over the bases of both lungs posteriorly, with prolongation of expiration and some mucous râles. The vesicular murmur was high-pitched over portions of the dull area. The heart's action was rapid and excited. The pulse was 76, the temperature 101.8°. The frequency of the respiration, however, were not recorded; but breathing was rapid and labored. The pulse was somewhat intermittent and was irregular in rate. In the abdomen was discovered a large mass occupying the greater part of the right hypochondriac and lumbar regions. The tumor was irregular in outline and near the middle line presented a particularly marked elevation, which was elastic on pressure, and gave the examiner the impression that it was a cyst. Percussion dulness was found in the right flank, tympanitic resonance in the left; but there was bulging in both regions. The intestines seemed to be pushed to the left side of the abdomen and were distended with gas. The urine was acid, of a dark color, and had a specific gravity of 1020. Its chemical and microscopical examination was negative. The woman was not jaundiced, and her bowels were moved freely after the administration of Epsom salt and an enema. There was no bulging in the vault of the vagina and the mass in the upper abdomen was not palpable by vaginal touch.

Under treatment directed to the pulmonary condition the cough improved, the mucous râles nearly disappeared and the expectoration became free. The patient, however, still found it difficult to lie flat upon her back, and usually was propped up in bed to make her respiration more easy. I repeatedly examined the woman during the first three weeks of her stay in the hospital, and became quite convinced that the tumor was a cystic growth involving the liver, and that portion of her dyspnœa was the result of upward pressure of the abdominal mass. This opinion was concurred in by Dr. F. P. Henry and Dr. Anna M. Fullerton.

On October 20th I made an incision some four inches long in the median line, extending from a point near the ensiform cartilage downward to one a little below the umbilicus. The incision uncovered that protuberant portion of the tumor which was conspicuous before operation was undertaken. This was evidently a cyst occupying the right lobe of the liver immediately below and to the right of the suspensory ligament. I discovered, by inserting my hand into the peritoneal cavity, that both the right and the left lobes of the liver, as far as I could feel, were occupied by numerous cysts, varying in size from an inch to four inches in diameter. The liver, by reason of these cysted growths, was enormously enlarged and the suspensory ligament extended almost to the umbilicus because of the growth upward and forward of the upper surface of the liver. I could feel the gall-bladder beneath the enlarged right lobe, and by palpatation discovered that it contained an irregular calculus. There was a little ascitic fluid in the peritoneal cavity. The cysts seemed not to communicate with each other but to develop independently throughout the substance of the organ.

The prominent cyst over which the incision was made was stitched to the parietal peritoneum by a continuous suture, because I believed that it was wise to de-

*Read before the Philadelphia Academy of Surgery, 1893.

lay its puncture until adhesion has taken place with the anterior abdominal wall. At the left side of the cyst above, the sutures were carried through the tissues of the suspensory ligament of the liver instead of being inserted into the cyst-wall proper. This procedure left an opening in the belly wall, occupied by the surface of the cyst, about three inches long and two inches wide. The lower part of the incision was closed by three interrupted silk sutures, so that the peritoneal cavity at this point might be kept closed. A dry antiseptic dressing was applied, and the patient was put to bed and treated as other cases of abdominal section are managed.

The diminution of intra-abdominal pressure produced by the escape of abdominal fluid and by the bulging forward permitted by the operation gave considerable relief to the dyspnœa. The contour of the abdomen somewhat changed and the outlines of the tumor were better defined on the left side. The patient was now able to lie down. Some clear serous fluid escaped from the upper portion of the opening where the liver was stitched to the belly wall. This coagulated from boiling and possibly came from the peritoneal cavity, not from any puncture in the cyst made by the needle. I was rather uncertain, however, as to the exact source of this leaking.

On October 27th I laid open the cyst without giving the patient ether. As I was about to begin operation her coughing and straining caused the ejection of a jet of serum from one of the suture punctures in the abdominal wound close to the umbilicus. This was evidence that there was some peritoneal dropsy and that the intra-abdominal tension due to the growth was great. The uncovered surface of the cyst was coated with a layer of plastic lymph of a yellow color.

A puncture was made with a trocar into the wall of the cyst and several ounces of clear fluid escaped. Into the cyst cavity thus emptied were projecting one or two distended cysts three-quarters of an inch to an inch in diameter. These were punctured and gave exit to limpid fluid. Directly behind the large cyst first opened appeared to be a second cyst. This I punctured with a knife and evacuated several ounces of fluid. I thought I detected with my finger fluctuation of a similar cyst behind the second cavity, though I could scarcely touch the posterior wall of this second cyst with my finger introduced through the first cyst and through the orifice between the two cysts. The sense of fluctuation was so similar to that given by the cystic tumors already punctured that I finally thrust a long trocar into the posterior wall of the second cyst. This operation was done, of course, in the dark.

Nothing but fluid blood escaped, and it is, therefore, probable that I punctured healthy liver tissue. The oozing continued while I was occupied in other steps of the operation, and was finally controlled, after a number of cysts had been emptied, by scooping out the clots and packing the deep cyst with iodoform gauze. Altogether I must have evacuated the contents of about three large cysts and five or six smaller ones, puncturing them with a knife thrust in various directions through the intervening cavities that had been laid open. The fluid in all of them was limpid. On the left wall of and within the first cyst opened was one of the cysts growing inward, already mentioned. When I punctured this with a knife I heard a whistling noise as though air had escaped from it. No fluid appeared to be in it, and at first I thought I must have opened the intestine, Careful exploration, however, with my finger showed the cyst to be empty and to have no perceptible opening in its wall except that made by the knife and through which I had introduced my finger. It seems impossible to believe that this contained gas only. A careful investigation of its interior with my finger failed to disprove this supposition. I am forced to believe that it was filled with gas but cannot understand the occurence. It was so deep that I could make no examination with the eye.

After some eight or ten cysts of various sizes had been opened by incising the wall between them, I cut away the anterior wall of the first cyst, making the opening into it correspond very nearly with the aperture into the parietes of the abdomen. This excision opened the peritoneal cavity at the upper and left portion of the wound where the suspensory ligament of the liver was attached to the left side of the abdominal incision. It will be remembered that at the first operation the suspensory ligament was seen and stitched to the belly wall in order to assist in shutting off

the surface of the liver from the peritoneal cavity at the seat of proposed secondary operation. The opening into the peritoneal cavity, made by the unexpected cutting through the suspensory ligament, was closed by a continuous silk suture. I then excised for examination a portion of the tissue which constituted the walls of several contiguous cysts in the bottom of the deep cavity in the liver made by evacuating the several cysts. An active venous hemorrhage occurred from a vein which was opened by cutting through the inter-cystic wall at a place where it was rather thick. The bleeding vein was compressed with pedicle forceps and afterward surrounded by two silk sutures carried through the tissue in a circular manner by a needle. This manœurve stopped the bleeding. The irregular cavities left by the evacuation of the cysts' contents were thoroughly washed with hot water and the whole space packed with iodoform gauze. A separate piece of gauze was pushed firmly into the deep cyst, which was being filled as previously detailed with blood from the wound in the liver behind. The patient showed comparatively little shock during the operation, reacted promptly, and has been for ten days in a satisfactory condition. She can lie flat upon her back, the respiration has been much less impeded, and no evidence of sepsis or peritonitis have occurred. The packing was not removed until the ninth day, and a new gauze packing was then adjusted loosely. Twelve hours later a secondary bleeding occured from the deep cyst, and iodoform gauze was again *tightly* packed into it. The fluid removed from one of the cysts was examined microscopically for echinococcus hooklets, but none were found. Chemical examination showed it to be albuminous—a condition opposed to the theory of the case being one of multiple hydatid cyst. The amount of serous fluid evacuated from the cyst opened was difficult to estimate, as the blood from the deep wound of the liver became mixed with the cystic contents. The fluid and blood together measured two quarts.

I have made only a hasty search of the literature of hepatic cysts; but have not been able to find as yet a case resembling this except one reported by Hayward.[1] His patient was a girl, six and a half years, who died after operation for multiple small cysts apparently connected with the anterior surface of the liver.

Cases of cystic degeneration of the liver and similar disease of the kidneys in the same patient have been observed and reported by Bristowe, Chantrenil, Courbis, Gayrand, Lataste, Pye Smith, Leboucher, Wilks, and perhaps others. The London Pathological Society's *Transactions* contain some interesting discussions on the subject. The cases whose reports I have thus far seen seem to differ materially from the case reported. Most of them seem to have been instances of very small cystic tumors, or more like a true cystic degeneration. Victor Leblond,[2] in his recent work says that serous cysts of the liver, that is, non-parasitic cysts, are very rare, that there existence is denied by some authors, that they are small and difficult to recognize and are apt to be associated with polycystic kidney. Mayo-Robson gives in his article on "Surgery of the Liver and Gall-bladder,"[3] an interesting account of cysts of the liver.

In my case here reported the condition of the kidney is unknown, for the patient is still living and apparently is convalescent. The cysts, however, certainly contained serous fluid and are quite large.

Further Note.—The patient seemed to be slowly convalescing, when a large bedsore formed over the sacrum, notwithstanding the fact that she had been kept on a water bed since before the operation. The temperature was somewhat elevated, but not markedly so. On November 11th, three weeks after operation, she died suddenly and unexpectedly.

Autopsy Notes.—Cyst wall found to be firmly united to abdominal wall at edges of wound, as approximated at time of operation. Extensive adhesions of the peritoneum found over the entire lateral and posterior surfaces of the liver.

The liver itself was greatly enlarged, weighing 11½ pounds, and was riddled throughout by cysts. One large cyst, opened post mortem, in the right lobe of the liver was found to contain about a pint of yellowish pus-like fluid. The solid portions of the liver resembled the

1 Sajous' Annual of the Universal Medical Sciences, 1892, vol. 1., C. 33; abstract from *Australasian Medical Gazette*, September, 1891.

2 Diagnostic et Traitement des Abces au foie (1893), p. 62.

3 *British Med. Journal*, April 15, 1893, p. 787.

condition called "nutmeg liver." A stone was felt in the neck of the gall-bladder, and the gall-bladder itself was greatly attenuated as a result of the pressure induced by development of the cysts. The spleen was somewhat enlarged and contained a whitish spot of softened tissue resembling a gummatous tumor. This was incised for examination. Both kidneys were greatly enlarged and riddled with cysts. The uterus and ovaries were found atrophied and non-adherent.

The pleural cavity of the right side was full of serous fluid. The base of the right lung posteriorly was completely consolidated. The left lung showed small areas of consolidation at its base and posteriorly, but was for the most part crepitant. There was no fluid in the pericardial sac.

The heart was pale, very soft and flabby and of normal size. The right ventricle was completely filled by a soft chicken-fat clot. The left ventricle was similarly occupied by a clot which extended into the aorta. Valves were perfect.

CLEFT OF THE HARD AND SOFT PALATES.*

J. EWING MEARS, M. D., PHILADELPHIA.

An experience extending over a period of twenty-five years, in which time I have treated by operative procedures upward of one hundred cases of deformities of the palate, has afforded me an opportunity to study the conditions involved, the measures for relief, and the value of the results obtained. The cases under treatment have included all forms, I believe, of congenital and acquired cleft—deformity limited to the soft palate, partial and complete in its extent; of the hard palate—partial and complete, including involvement of intermaxillary bone, and the upper lip, with either single or double cleft. With regard to the cleft of the soft palate, I have observed that in nearly all cases of complete cleft there has coexisted a cleft in the hard palate, implicating to a slight extent the horizontal plates of the palate bone. I soon learned that this condition had an important relation to the success obtained in effecting closures, and I shall refer to it when discussing operative measures.

Of acquired cleft I have met with various forms—from simple perforation, by a small opening, to almost entire obliteration of the soft and hard palates, with destruction of portion of the osseous structures of the nasal cavities. In one instance there was not only a fissure in the median line, but the lateral portions were united by firm adhesion to the posterior walls of the pharynx.

In congenital cleft of the hard palate I have met with instances in which the fissure being bilateral there has been more or less deficiency of the vomer, and in other cases the fissure being limited largely to one side, the vomer, somewhat deflected has been found in articulation with the side less involved, thus permitting communication between one nasal fossa and the ora cavity only.

In the study of the cases under treatment I have been interested in arriving at satisfactory conclusions as to the causes concerned in the production of the deformity, and to what extent hereditation and maternal impressions take part. During the summer of 1876 a lady from the far West came to my office for consultation. As soon as she addressed me I thought I recognized by the nasal articulation and guttural tone of voice, a cleft of the palate, and remarked: "I know why you have come to me for consultation; you have a cleft palate." She replied: "I have not, but I have the articulation of one having a cleft palate, and I have come to you for relief." On examination I found there existed a marked shortening and rigidity of the soft palate which prevented its contact with the posterior wall of the pharynx and thus led to the production of the nasal tone of voice. By division of the tensor palati and the palato-glossi and pharyngei muscles I relieved the tense condition of the velum and secured its elevation so that it approached quite nearly in contact with the posterior wall or the pharynx and very materially improved the articulation. The patient had recently married. A few years after

* Read before Phila. Academy of Surgery.

she brought to me her first-born child, which had a complete cleft of the soft, with partial cleft of the hard palate, upon whom I operated with good success.

A man, upward of fifty years, consulted me for cleft of the soft palate, the result of diptheritic inflammation when a child. His mother dying during his childhood, his father married a second time, and he was a victim of a step-mother's jeers, as well as of her cruelty, on account of his unfortunate condition. Daily she would imitate his tone of voice. Her first child by the victim's father had cleft of the palate. Other instances I have met with in which the mother attributed the condition in the child to having conversed with a person who suffered with cleft palate, etc.

Whatever casual effect hereditation and maternal impressions may have, the observations made in the Dublin Zoological Gardens some years since in the case of lion whelps, have quite positively determined that the condition may be due to a want of proper nutrition in the mother during the period of gestation. Up to the time referred to it had been impossible for the authorities in charge of the garden to rear the young of the lion on account of the universal occurrence of cleft of the palate, which prevented the taking of nourishment to maintain life. The plan of giving to the mother during pregnancy ground bone and food containing the inorganic elements of bone was crowned with success, and within the past years a large revenue has been derived from the sale, to all parts of the world, of lions raised in this garden. The lion whelps in the Zoological Garden in this city have suffered in the same manner, and I have suggested to the superintendent to adopt the plan practiced in the Dublin Garden. During our conversation he stated an interesting fact, that the whelps of lions in traveling menageries did not suffer as those born of mothers confined in gardens, and he was disposed to account for the fact by the rough life led by them, as well as by the variety in the food, consisting of bones as well as of meat—sometimes more of the former than of the latter.

The conclusions which may be drawn from the consideration of the above observation are to the effect that the fissures are due to a want of coalescence of the palatal processes and embryonic tissues during embryonic life, the absence of which union is not due to an infolding or reduplication of the membranes, but to a positive non-development caused by want of proper nutrition. Coalescence cannot take place because the parts are not in approximation.

The conditions presented by persons the subject of cleft palate, are defective articulation, defective deglutition, and, as a rule, more or less chronic inflammation of the nasal and pharyngeal spaces. Those conditions vary in degree in accord with the extent of the lesion, but I have observed as great an involvement of articulation where a slight notch only existed in the uvula as where both soft and hard palates have been fissured. The important function of the velum is, by its approximation to the posterior wall of the pharynx, to shut off the cavity of the mouth from the cavity of the nose, so as to prevent the passage of sounds and of food into the latter during articulation and deglutition. The muscles of the velum control by their action the opening and closing of the posterior nasal apertures, as those connected with the nasal cartileges regulate the opening and closing of the anterior nasal apertures. In cases of palate fissure in adults I have observed the use made by the anterior muscles in the effort to do the duty of the velum in so narrowing or contracting the anterior nasal openings as to prevent the escape of sounds or food. The chronic inflammation which exists in cases, as a rule, of extensive fissure, is due to the exposure of the parts to the effect of the air which comes directly in contact with the surfaces without passing through the recesses of the normal nasal fossæ.

The object to be accomplished by treatment is to close the clefts. This can be done either by the adaptation of artificial appliances—obturators—or by operative procedures—staphylorrhaphy, when upon the soft palate; uranoplasty, when upon the hard palate. Since the introduction of these methods each has had its period of employment. Discouraged by the failures to obtain perfect results by operation artificial appliances came into vogue and were employed to the exclusion of operative measures. These failing to satisfy the requirements and especially failing to give comfort to the patient, lost favor and a revival of operative methods has oc-

curred. In my experience I have never found the use of the obturator in cleft of the soft palate satisfactory. In cleft of the hard palate alone I have frequently advised its employment, where the rudimentary palatal processes have been so narrow as to forbid operation, or where the openining was not very large. In some cases in adults of cleft of soft and hard palates, I have closed the soft palate by operation and had adapted to the opening in the hard palate an obturator. In children, I always advise closure by operation.

I have operated at various periods of life—from three years to fifty. I advise operation at an early age in order that the growth of the parts may be facilitated, and that the education of the child may receive proper attention. In children and young persons, especially in females, I use an anæsthetic agent—a mixture of chloroform one part to ether two parts; the patient is placed or held in a sitting or semi-recumbent position. The mouth is held open by a gag which I devised and which has proved satisfactory, easy to introduce, readily held in place, and one which can be quickly removed. In paring the edges of the cleft I secure as large a raw surface as possible in order that the union may be strong. I have tried many forms of needles and varieties of sutures, and I have found the simplest the best. The instrument employed consists of a handle to which needles of various curves can be securely fastened. Silver-wire sutures of medium size are used, a strong linen thread, double, being first deposited and the wire suture hooked into the loop and drawn through; the suture is deposited on one side at a time. The needle is introduced some distance from the edge so as to include a sufficient amount of the tissue to hold the edges firmly in apposition without tension. When the sutures are all in position the edges are brought together and the muscles divided which may be neccessary to relieve all tension. The tensor palati is divided near to the hamular process, and the platoglossi and plato-pharyngei as low down as they can be reached. In my later operations I have removed the sutures earlier, beginning on the fifth or sixth day to remove those affording the least support and completing removal by the seventh day. This plan has given better results. Liquid food, milk chiefly, is administered by a spoon, whilst the sutures are in position. The patient gradually returns to the use of solid food.

In operations upon the hard palate the method of Sir William Ferguson has been latterly employed, having failed by other methods to secure good results. The steps of the operation consist in freshening the edges, depositing the sutures through openings made with the drill in the bony processes, division of the processes by the chisel or saw, drawing of the segments thus formed to the middle line, and securing them in place by twisting or shotting the wire. The section of the bone should be made so as to avoid wounding the vessels and nerves which come into the oral cavity through the posterior palatine canals, and which line in a groove at the base of the alveolar process. Division of the soft palate downward is necessary to bring the segments in position without undue tension. The cavities formed by the transplantation of the segments are plugged with iodoform gauze, 5 per cent., which affords support and controls hemorrhage. On the third day the plug is removed, and as the spaces close they are gradually reduced in size.

End-results. As to operative procedures on the soft palate. If careful examination has been made to detect slight notch in the hard palate and the bone has been divided, union in entire extent has occurred. In cases of long uvuals non-union has sometimes occurred at the very end; if the length permits, cut off.

As to the hard palate. In certain cases slight necrosis of portions of the segments, caused by splintering at the time of section, has occurred and the pieces removed. This has not interfered with the reparative process. In one instance the space on one side, left after drawing segments to the median line, was so large that it did not close completely—an obturator was successfully adapted.

As to the restoration of function. In all cases of deglutition has been markedly improved, rendered perfect except in a few instances of short and rigid vela in which hasty and careless efforts at swallowing are accompanied by the passage, especially of liquids, into the nasal cavities.

The improvement in articulation has

varied greatly and the improvement has depended largely upon the size and conformation of the faucial and pharyngeal spaces. In a few it has been complete. I can recall at this time a lad who had complete cleft of palate, alveolar process, and upper lip. In infancy the cleft of the lip was closed by Professor S. D. Gross. At the age of twelve I closed the palate cleft, and in his case articulation was so perfect that no variation from the normal could be detected. A lady, twenty-eight years of age, had cleft complete of the soft with partial cleft of the hard palate. After operation she became a salaried member of a church choir, her voice being entirely free from nasal tone. In many the improvement is partial but progressive, especially in children where pains are taken to educate them properly. In some cases where I have been able to retain charge of the patient I have rendered assistance, as growth took place, by subsequent division of the palate muscles, thus increasing the movement of the velum.

In all cases, children and adults, the effect upon the *morale* has been good, and for this reason, if no other, the operation is justified.

TUMORS OF THE PERIPHERAL NERVES; WITH THE REPORT OF A CASE OF SARCOMA OF THE SCIATIC.

THOMAS S. K. MORTON, M.D.*

All tumors growing in or upon peripheral nerve trunks have come to be classed as neuromata, and of these two general divisions are made—the true and the false. The true neuroma is composed of nerve elements, while a false neuroma is a tumor developing in connection with a nerve or its sheath, but not composed of nerve elements. Virchow has proposed that only true nerve-tissue growths be called neuroma, while other tumors growing in connection with nerves shall receive the same name as would similar neoplasms occurring elsewhere. This more simple and accurate method of classification has not, however, been followed generally by writers.

Fibroma is the common tumor found in connection with nerve trunks, and is usually composed of white fibrous material with few connective-tissue cells. Plexiform and multiple neuromata are usually congenital and often hereditary, slowly growing varities where a number of nerves undergo a fibrinous change and occasionally form plexes of sensitive interlacing cords. The subcutaneous terminal extremities of sensory nerves may undergo fibrous changes and form the so-called "tubercle dolorosa." According to Bowlby[1] sarcoma is next in order of frequency. "They may belong to the round, oval, or spindle-celled varieties. In such growths especially in those which increase very rapidly in size, degeneration cysts may form so that the tumor may become partly filled with fluid. The contents of such cysts are usually blood and broken-down cells." Very rarely myxomas are met with. In these the mucoid material grows from the nerve sheath. Glioma, as may also be said of syhiloma, is all but unknown, excepting upon the cranial nerves, and even upon these is almost never observed beyond the confines of the cranium. Two cases of simple cyst containing clear fluid, in connection with nerve trunks have been reported by Bowlby. I have found references to cases upon record as fibro-sarcoma, myxo-sarcoma, and cavernous sarcoma; also to "blood-cyst" of nerve trunks. The two latter, in the light of modern pathology, probably being instances of cystic degeneration of simple sarcoma. All nerve tumors show a marked tendency to malignant degeneration. Secondary or metastatic tumors of nerves are probably not uncommon. Probably more records of tumor of the optic nerve than all others put together are to be found in medical literature, but nerve-trunk tumors must be considered as rarities when judged by the very small number that I have been able to find reference to in the books and *Index Medicus*.

Diagnosis, before operation, except in

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1 Injuries and Diseases of Nerves. London, 1892.

the case of superficial neuromata, unless there are marked motor or sensory disturbances, is almost impossible in the majority of cases. Even these symptoms may be simulated by pressure upon the nerve by outside growths. It is a remarkable fact that most tumors of nerves give rise to but trivial changes of sensation, and the conveying and trophic power of the fibres is almost never fully destroyed. When the tumor has actually been exposed by dissection, unless the surgeon is exceedingly careful, a nerve is liable to division or other injury before the true nature of the growth is discovered. Cases are upon record where excellent surgeons have not recognized the nature of tumors until the ensuing paralysis of function and the microscope have solved the problem.

Removal of these neoplasms which involve all of the bundles necessitates total division of the nerve trunk above and below the tumor; which should be followed, if possible, my immediate approximation of the ends by the employment of some one of the various methods of suturing, lengthening, or splicing and the subsequent placing of the parts by posture in that position which gives greatest relaxation to the nerve trunk involved. Where approximation is impracticable the ends should be "aimed" at each other by chromic catgut sutures, and regeneration with more or less restoration of function may be expected to slowly supervene in many cases. When the growth involves simply the sheath of a nerve, either internally or externally, prompt recognition of its nature and relations, together with careful dissection, will prevent injury to the nerve itself. If the tumor is within the sheath—as in my case—a longitudinal division of the sheath without division of any of the nerve fibres will be sufficient to fully expose it. If then it is found to arise from a few of the nerve bundles these may be divided and the growth shelled out of its bed, if possible, without rupturing the capsule if it possesses one. Any small number of fibres that may be thus divided may be expected to regenerate and coalesce; larger bundles should at once be sutured with catgut. Subsequent suture of the divided sheath would appear to be a neat point of technique, but as proved in the case here reported, is sometimes unnecessary. On the other hand, the possibility of hemorrhage taking place within a tightly sutured sheath must not be lost sight of. Gowers is authority for the statement that excision of nerves on account of tumor is prone to be followed by the development of bulbar (traumatic) neuromata. This may have been true of nerve sections prior to the antiseptic period, but absence of suppuration, combined as it often can be, with immediate suture should render such results here, as elsewhere, very unusual.

The history of the case which has suggested these remarks is as follows:

Mrs. D. A., aged forty-two years, a Russian of the middle class, entered the Polyclinic Hospital October 3, 1893, with a tumor upon the back of the left thigh. Family history negative so far as could be secured. Physical examination, excepting the tumor, negative. Urine normal.

She stated that about one year previously she had accidentally discovered a small nodule deeply situated upon the posterior portion of the left thigh; that it had grown slowly at first, but during the past three months with increasing rapidity; and that, excepting inconvenience in sitting upon the mass which gave rise to some pain, the tumor had caused little or no discomfort. No definite history of any sensory or motor disturbance in the sciatic distribution could be elicited.

The growth was the shape and size of a large goose egg, with its long axis corresponding to that of the thigh. It lay exactly over the course of the great sciatic nerve, midway between the tuberosity of the ischium and the flexure of the knee-joint. It could be moved somewhat from side to side, but almost none at all upward or downward. It did not move when the posterior muscles of the thigh were exerted. To pressure and palpation the growth was almost insensitive. It felt like a soft fibroma or fibro lipoma, but did not impart any sense of fluctuation.

On October 6th a careful dissection was made and the tumor exposed at the base of a six-inch incision. It was noted that each time the growth was impinged upon by the finger or an instrument, the lower leg gave a sharp, convulsive start. When moderately cleared of its surroundings, the fact that a neoplasm involving the sciatic nerve was to be dealt with was made very evident by observation that the fibres of nerve could be seen as glistening white

cords of varying size, beautifully frayed or spread out as they ran around the growth through the encapsulating nerve sheath. A vertical incision, avoiding nerve fibres, was made to the full extent of the tumefaction through this apparent capsule, when it was further discovered that the tumor proper was entirely disconnected with the sheath, and was separately enclosed in a capsule within. The growth was readily separated from the sheath of the nerve in all directions except at points at the extreme proximal and distal extremities, where a few nerve fibres entered and emerged from it respectively. Some small blood vessels appeared to accompany the strands of nerve substance into the tumor. These fibres having been divided, the growth was lifted out without further difficulty. Upon examining the cavity in the nerve sheath from which it came, it was observed that most of the bundles of the sciatic were in advance of and had been spread out over the external surface of the growth, but that no appreciable injury had been done them with the exception of the few fibres which had necessarily been divided as they entered the tumor. No sutures were applied to the nerve sheath, nor were any ligatures called for. The wound was closed without drainage by alternate deep and superficial silk sutures and a pad of dressing so applied as to make compression upon the cavity left by the tumor. The operation was followed for two days by some pain in the sciatic distribution, but especially in the region supplied by the external popliteal, but no loss of power ensued. All pain disappeared in forty-eight hours, however, and afterward she had no disagreeable sensations. Upon the seventh day all sutures were removed and absolute primary union throughout was found. On the tenth day she began to walk about, and four days later walked home, apparently as well as ever. Up to this date she has so continued.

The tumor was ovoid in shape, four inches in length and seven in circumference where thickest. At either extremity a few nerve fibres and blood vessels appeared to enter or take their exit. Otherwise there were neither adhesions nor pedicle. The growth was encapsulated with a tough brownish-colored membrane, which brought away small granular portions of the tumor when forcibly separated from it by peeling. The neoplasm proper was of a yellowish-brown color, rather dry, and cut like fibro-fatty tissue. Exactly in the centre of the mass was a cavity, not definitely separated from the growth, which contained about half an ounce of bloody fluid. Most unfortunately, during the preparation of the specimen for further study it was accidently destroyed, so that I have not the satisfaction of adding to my clinical and gross pathological diagnosis of sarcoma that of microscopical confirmation. However, the details of several cases almost identical with this in every way, which I append, where sarcoma was proved by the only accurate method, will, I trust, be found to justify me in classing this case as one of that dread malady.

From the scant literature of peripheral nerve tumors I have abstracted the following cases, which are of great additional interest from the evidence which some of them afford relative to the remarkable regenerative powers of nerves, even when great lengths have been removed with tumors and suture has been omitted or found impossible.

Hume[1] reports the case of a man, aged twenty-four, who presented himself with a tumor on the back of the left thigh, which he had observed for five months. It extended from the fold of the buttock to the upper part of the ham, being ovoid in shape and movable from side to side, but not from above downward. There was much pain in the knee and foot, but no loss of motion or sensation. The tumor was easily shelled out with division of the entire nerve above and below. The growth was surroundrd by and incorporated with the strands of the nerve. Besides the main portion of the tumor, the nerve trunk above and below appeared to be infiltrated with the same material, so that it was necessary to remove in all six inches of the sciatic. The cut surface of the growth was of a yellow fatty appearance. There were several hemorrhagic spots in its substance; also others that looked like necrotic or caseating patches. It proved to be sarcoma. The man, soon after operation, was able to walk upon the limb, but there was much wasting and great impairment of sensation. Below the knee palsy of muscles and sensation was complete six months after operation.

1 Lancet, September 19, 1891, p. 654.

A second case, recorded in the same place by Hume, was that of a man, thirty-seven, who had noticed a nodule under the gluteus maximus of the left side four months before coming under observation. He had been subject to molluscum fibrosum from childhood. At the time of operation the growth had attained the size of a "melon." It was found to originate in the great sciatia, the strands of the nerve being stretched over and incorporated with the capsule of the tumor. The small sciatic lay over the tumor and was pushed aside. To remove the growth it was necessary to entirely divide the nerve close to the sciatic notch above and at the border of the gluteus below. By stretching of the nerve ends and extreme flexion of the knee and extension of the hip, all of the upper end of the nerve and one half of the lower extremity were brought together and sutured with strong catgut. In order to lessen strain upon the sutures the patient was made to assume the prone posture, with the hip in extreme extension. The tumor was found to be a round-celled sarcoma. There was primary complete paralysis of the functions of the sciatic. Eighteen months later skin sensibility of the foot was absent, but that above the ankle was almost normal, and there was very little atrophy of the muscles. At this time he presented a large sarcoma of the right chest wall, with pleural effusion, and died five months subsequently. It was then found that he also had a growth in connection with the pleura; nodules in several of the intercostal nerves, the liver, and in the humerus and lung of the opposite side. At the site of operation the sciatic nerve was found at the level of the tuberosity of the ischium to be divided into two portions; the internal of these passed into a nodular swelling, which was continuous upward with the proximal portion of the nerve; the external portion was lost in cicatrical tissue, by which it was attached to the surrounding parts and to the side of the nodule. The whole thickness of the lower end of the central portion was continuous with the nodular swelling. The latter had evidently formed at the line of suture with that portion of the peripheral division of the nerve which it had been possible to bring into contact at the operation. The nodule consisted entirely of nerve tubules and fibrous tissue. There was no local recurrence of sarcoma.

Hume, in the same article, also records the following case: A man, aged forty, had recognized a rapidly growing nodule behind his knee for four months. Upon incision in a large oval, growth of great vascularity was found in connection with the internal popliteal nerve. The short saphenous nerve was stretched over it, thus explaining all pain that the patient had suffered. Three and a half inches of nerve were excised. The ends were not sutured. The man soon returned to his occupation of miner, with paralysis of the popliteal distribution. The growth was encapsulated in the sheath of the nerve and appeared to be defined at each end, but a small number of nerve fibres passed through it. The bulk of the substance of the nerve laid behind the tumor. In its interior one or two cavities filled with blood were found. Six years subsequently the cutaneous sensibility of the leg had returned to the normal, excepting a slight impairment in the centre of the sole, and all muscular movements of the leg and toes were perfect. There was no wasting of the parts whatever.

Little[1] reports the following case: a woman, aged twenty-five, presented a large, firm tumor upon the posterior portion of the thigh above the popliteal space. The first symptoms were dull pains along the thigh and upward. There was no pain in walking, but considerable discomfort in sitting. The tumor pedicle sprang from the sciatic nerve sheath. One inch of the nerve was resected and the ends sutured together. The functional result was almost perfect in a few months. The growth was twelve inches in circumference. It proved to be a sarcoma and probably originated from the neuroglia. There was a true bony centre in the tumor.

McBurney[2] records a case where a man aged twenty-seven presented a growth of six years' development upon the inner side of the right arm. There had been no considerable pain until a month before operation; the pain extended down the arm and pressure was exceedingly painful. It was found to spring from the median nerve in the upper third of the arm; was encapsulated, and when opened, it was

1 Boston Med. and Surg. Journ. December 3, 1885, p. 533.

2 New York Med. Journ., May 1, 1886, p. 504.

seen that the fibres of the nerve spread over the growth. The major portion of the tumor was behind the nerve. The neoplasm and capsule were removed with division of but a few fibres of the nerve which entered it. Microscopic examination proved the tumor to be fibro-sarcoma.

In addition to the above detailed cases I have been able to find the following references to sarcoma of the nerve trunks:

Ramoneda: Sarcoma fuso-cellular del nervio neumo-gastrico derencho; su exterpacion, conservándose la continuidad del tronco nervioso; dotos intersandes acerca del nervio hipogloso. Rev. clin. de l'hosp. Madrid, 1891, iii., p. 241.

Van Inschot: Fibro-sarcome caverneux du nerf. radial (propagé an triceps brachial). Ann. Soc. de med. de Gand., 1887, lxvi., p. 14.

Weile: Ein Fall von Sarcom. des Nervus radialis. Erlangen, 1888, 8vo.

Bardeleben: Sarcom des Nervus ischiadicus. Charité Ann., 1883, Berlin.

Herczel: Ueber Fibrome and Sarcome der peripheren Nerven. Beitr, zur path. Anat. u. z. alleg. Path. Jena, 1890, viii., p. 38.

Peret-Gilbert: Considérations sur les néoplasmes primitifs des nerfs des membres. Paris, 1891, 4to.

Krause: Ueber maligne Neurome und Vorkomen von Nervenfasern in denselben. Samml. klin. Vort. 1887, No. 293.

TWO RECENT CASES OF EXCISION OF THE VERMIFORM APPENDIX FOR CHRONIC RELAPSING APPENDICITIS IN THE INTERVAL.

THOMAS G. MORTON, M.D.*

Joseph H. H., aged twenty-four, has been suffering for eighteen months with occasional attacks of severe pain in the right ileo-cæcal region, with the usual symptoms attending catarrhal appendicitis; the first attack, in the spring of 1891, was a severe one; he was unable to attend to his business for some six weeks; the second lasted only a few days, and subsequently he had four attacks, each more or less marked; the last he had before coming to Philadelphia was particularly severe, indeed very threatening, severe pain, not only local but extending to the bladder, circumscribed swelling and hardness, constipation, irregular chills and fever; recovery protracted.

The patient's condition during the attack was indeed so alarming that it was deemed best he should seek operative relief. Examination disclosed tenderness on pressure and moderate hardness in the appendix region, and with the history an operation was advised, and two days subsequently a lateral section was made; the appendix was found firmly bound down, as was the case with the cæcum, by adhesions; the organ was tied off as was its mesentery; it measured rather more than three inches in length; it was greatly distended near its middle, and the proximal and distal ends were thickened and swollen; a section showed total obstruction of the organs except its middle or distended portion, which was filled with about two drachms of very offensive pus.

No unfavorable symptoms followed, and the patient returned to his home in Clearfield County, on the fourteenth day afterward, and has been quite well since. It is probable that the thinned pus sac would soon have ruptured into the abdominal cavity.

Mr. G. H., aged thirty-four, of Huntingdon, W. Va., has written as follows:

My first attack, on April 25, 1892, was a severe one; sharp pains in the bowels, intestines swelled and became very hard; felt knotted; continuous vomiting. Relief was obtained only through copious rectal injections and bowels moved on third day; able to be out, though very weak, in ten days.

The second attack occurred about the beginning of June, 1892; pains severe, symptoms same as in first attack, though not so intense. Cathartics acted in conjunction with injections, after about eighteen hours; out in five days.

Next attack was in September; same symptoms as in other attacks, not so severe, however, as the former two. Cathartics gave relief without injection; out in five days.

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The fourth attack was in December, was severe, in bed a week; cathartics and injection both used; pain worse than in other attacks.

The fifth attack was in April, 1893; the attack was slight, lasting only three days; same symptoms, no injection used, only salts as a cathartic.

The sixth attack was in July, and the symptoms were mild.

Last attack commenced September 20th; was seized with severe pains in the middle of the night; no relief of bowels for twenty-four hours; semi-unconscious at intervals, but whether from the pain or effects of morphia cannot say. Copious vomiting; injections only used; stomach much distended and very hard. Relief came on second day.

In all the attacks morphia was used to ease the pain, and Rochelle and Epsom salts were the cathartics employed.

Early in September Mr. H. reached Philadelphia, much broken down by the series of attacks, especially the one just recovered from; and feeling satisfied that he could not live through another seizure, and there being no question of the appendix being the source of the trouble, a lateral section was made October 6th; on lifting up the cæcum the appendix was found enormously elongated, or stretched, measuring probably seven inches, its distal end was attached far up to the side of the ascending colon; when this attachment was separated the organ contracted to about four inches; it had a continuous mesentary its entire length, which when tied, the organ was excised.

Convalescence and final recovery was slow; after the operation there was considerable pain, no special temperature, but more or less colic, and great trouble was experienced in getting the bowels to act, calomel was at first given in minute doses, this was followed by salts, and the bowel inaction continued for rather more than two days, when relief followed injections of glycerin; more or less pain at times seemed to indicate that the intestines had not regained their normal position, but gradually the symptoms subsided, but not until the fourth week did the bowels act without injection. The suture points and the surroundings of the abdominal wound for the first few days were more or less inflamed and irritable, but no further trouble was experienced; the distention of the abdomen from flatus probably brought about wound and suture tension and the slight surrounding inflammation.

Mr. H. was about the house at the end of the fourth week, and seems quite well, the bowels acting without assistance.

"*Examination of the Appendix, made by Dr. W. K. Walker, of the Orthopædic Hospital.* The tube, which is 3⅛ inches long, is firm and rigid, so that it can be held by one extremity in the horizontal position without bending in the slightest degree. The vessels of the peritoneal coat are slightly injected.

"The lumen of the tube is narrowed, mucous membrane thickened and found covered throughout with a tenacious mucous.

"Near the distal end of the appendix is found a hardened mass of inspissated mucous and fæces one inch in length and one-sixteenth of an inch in diameter.

"The mucous membrane is everywhere injected, but most markedly at the distal extremity of the tube (for a space of 1¼ inches) in which are seen several punctiform hemorrhages with two of considerable size (about 1-16 by ¼ inch).

"At the point of location of the plug of inspissated mucous and feces are seen two very small necrotic areas (about the size of a pin's head) involving only the mucous membrane, and one of the same size and character, one-half inch from the proximal end of the tube.

"*Microscopical Examination.* A specimen of the mucous placed under the microscope shows an abundance of pus cells with some red blood-corpuscles.

"A section of the tube shows thickening of all the coats, but particularly the mucous, enlarged blood vessels, and in the hemorrhaghic areas, infiltration with red blood-corpuscles."

Of the death rate after operation for appendix excision in the interval between attacks we have no definite information, but recently (October 29th), Dr. W. T. Bull has written, asking for the number of such cases I have operated upon, the number of deaths, and the cause of death; so that we may soon expect to have an estimate of the mortality in this operation; I was only able to furnish Dr. Bull with three cases, all of which recovered; but I am disposed now to consider the operation a more serious one than formerly, for in each instance in

the cases I have had under care, unusual difficulties attended the operation, rendering it protracted, dangerous and difficult. Yet I shall continue to advise the excision of the appendix in all such cases associated with a history of chronic relapsing inflammation, as has been detailed in these two cases just reported, as I think the operation in the interval less dangerous than the risk of perforation of the appendix and with the association of septic peritonitis.

SOCIETY REPORTS.

PHILADELPHIA ACADEMY OF SURGERY.

Meeting, November 6, 1893.

Dr. W. W. Keen presented a paper on

GASTROSTOMY BY WITZEL'S METHOD FOR PRIMARY CANCER OF THE ŒSOPHAGUS.

(See page 923).

DISCUSSION.

Dr. John B. Deaver: I have been much interested in this satisfactory demonstration. I have performed two gastrostomies, and the difficulty experienced was in preventing leakage. The method which I pursued consisted in exposing the stomach, transfixing the walls and bringing them in contact with the parietal peritoneum, and opening the stomach and introducing a rubber tube or silver canula. I consider the operation described to-night a superior one. In one of my cases an eczematous condition of the skin surrounding the opening was very marked.

Dr. O. H. Allis: I would suggest that if, after taking food, this man put something into his mouth and chewed it, digestion would be facilitated and a great deal of dyspepsia avoided. We are all familiar with the experiments of Beaumont, who, by putting sapid articles in the mouth of the subject, could see the gastric juice poured out. Bearing this in mind, I have in many cases of dyspepsia advised the patient to put something pleasant into the mouth after eating, and chew it for twenty minutes.

Dr. T. S. K. Morton: I wish to add my testimony to the value of the gastrodiaphane in the diagnosis of tumors of the anterior wall of the stomach. The patient first swallows a couple of glasses of water, and the light gives a beautiful red glow over the whole upper portion of the abdomen. In a case of suspected gastric carcinoma which I saw with Dr. Cohen, on either side of the middle line were seen two curious darkenings which at first we thought might be tumors, but which subsequently were found to be the recti muscles. I do not believe that with the light one could diagnose an ulcer or a minor change of structure, but if there were a gross lesion it would be shown. It also outlines the location of the stomach.

Dr. J. Ewing Mears read a paper on

CLEFT OF THE HARD AND SOFT PALATES

(See page 966)

DISCUSSION.

Dr. John B. Roberts: I have been much interested in Dr. Mears' paper. These are the cases in which we want the opinion of an expert, and a man who has seen as many of these cases as Dr. Mears is entitled to the respect that we give to an expert. I have had rather a large number of these cases recently. I see a good many cases in infants at the Woman's Hospital and have been somewhat afraid to attack them. My feeling is that many of these cases are not very satisfactory, and in such young children I have been inclined to postpone operation with the result that many of the cases have not returned. Thrice recently I have operated on hare-lips where there was also cleft palate, operation on which I postponed, feeling that there was not enough bony tissue. I was, therefore, anxious to hear how he manages these cases. The operations on the cleft lip have been somewhat unsatisfactory on account of the cleft alveolus failing to give support to the nose.

In one case I cut through the alveolar process on both sides of the cleft and brought the parts over with a suture as suggested by Wyeth, but that case apparently is not going to do very well. I got the edges closer together, but they did not come in contact. Dr. Bower operated on a similar case using a silk suture, and seems to have gained a great deal. The procedure does not close the palate, but it bring the anterior part together, but of course in these cases no attempt was made to close the posterior gap in either the soft or hard palate. I should be glad to hear what is Dr. Mears' experience in these cases. What does he do where there is cleft palate, with cleft of the lip and of the alveolus?

Dr. W. W. Keen: I am glad to find that Dr. Mears' advocates the operative treatment which, as a rule, is by far the best. In some cases, however, where the cleft has been large I have seen altogether the best results from the use of an obturator, in the form of one made by Dr. Thorington, consisting of soft rubber with a soft rubber and therefore flexible palate.

There is one point on which I would ask Dr. Mears experience and practice. In operating on cleft of the soft palate, I have found no difficulty in securing union, except at one point, and that is where the soft palate joins the hard. The soft palate is very thick from a little above the tip up to near the point where it joins the hard palate. Here it becomes thinner and in some cases almost translucent. In many cases where the rest of the palate has united, there has been left a little opening at this point which I have had to close by a secondary operation or by the use of nitrate of silver or the actual cautery. I should like to know if Dr. Mears has met with the same trouble and how he has overcome it.

Dr. R. H. Harte: Has Dr. Mears tried the operation where one flap is transplanted from one side to the other in complete fissure of the hard and soft palate, and the raw surfaces then drawn together? I think it is known as Davies Colley's method.

Dr. Mears: In reply to Dr. Roberts I desire to say I have operated on cases where there has been a cleft of the palate, cleft of the alveolar process, displacement of the intermaxillary bone, the bone being turned up sometimes at right angles, with cleft of the lip. My practice has been to break down the inter-maxillary bone and bring it in place after freshening the edges and then wiring the parts together. Where this bone has been taken away, as has sometimes been the case, I have divided the process on each side and drawn the detached portions over, approximating them in the centre. I think that is the only method which can be practiced with any prospect of success. I close the hare lip at an early age, sometimes at two weeks, and later the operation on the palate is performed.

I have called attention in the paper to the point to which Dr. Keen has referred. The difficulty he has had I have had in my earlier operations, and I could not account for it until I made a close examination. I then found that just at the line of junction between the horizontal plates of the palate bone, there was a slight notch, and that was sufficient to prevent union at this point. In these cases I cut on each side and draw a segment of bone over, and in this way I have never failed to obtain union at this point.

I tried the operation of transplantation and closure by periosteal flaps in my earlier work. I have never succeeded satisfactorily with these methods, and, therefore, I have later used the method of Ferguson, making sections on each side and drawing the segments over the middle line. Where the alveolar process is very narrow it is difficult to get sufficient bone to close the gap, and if there is necrosis from splintering the reparative process is less likely to go on satisfactorily, but even when necrosis takes place reproduction of bone may occur.

Many surgeons look upon these operations as the *bete noir* of surgery. They do not like to undertake them. I am glad to say there has been a revival of the operation, particularly in Boston. I believe that the adaption of any obturator is unsatisfactory. I have seen the obturator to which Dr. Keen refers, and I have found that patients complain of the discomfort arising from its use where it is applied to the soft palate. Closure of the hard palate by obturator is easily effected. I have not seen either abroad or in this country any obturator which gave the pa-

tient complete comfort, or which I thought as satisfactory as operation which closes the gap.

With regard to the results we all know what they are. I have had some exceptional cases in which the results have been perfect, and I have had a large number in which there has been some improvement, and some in which there has been little or no improvement as regards articulation. I tell patients that a natural tone of voice cannot always be accomplished. This depends a good deal upon the size and form of the pharyngeal and post-nasal space. In some cases the pharynx is very capacious, and when an attempt is made to bring the soft palate in contact with the posterior wall of the pharynx, the space is so great that this cannot be accomplished. In these cases the difficulty in articulation is not entirely removed, and sometimes the difficulty in deglutition is imperfect. In children I have found the greatest benefit derived from the moral effect produced by operation. I think the operation should be done and an effect made to help children suffering from the deformity.

DR. KEEN: I wish to say in regard to the obturator of Dr. Thorington, that although I have not seen it used in many cases, yet where it was used no discomfort was complained of. It has been so excellent that in cases of very large cleft I have rather determined to rely upon it instead of operation.

CORRESPONDENCE.

HOW SHALL THE DISPENSARY ABUSE BE REMEDIED?

In a recent issue of the *New York Medical Times* "A plan to remedy the dispensary abuse" is considered.

The writer recommends that a certain number of physicians, who are so disposed, shall divide New York into districts, and that each one shall voluntarily and gratuitously give his attention to the poor deserving sick, both at his office and at their residences. The physician who registers "must promise never to refuse service." The indigent applicants are to have their names so registered that imposition will he prevented; the patients are to have their medicines supplied free through pharmacies, scattered through the city, supervised by the department of Charities and Correction, etc. It is added by this plan instead of a few large clinics we will have several smaller ones.

While appreciating the motives which inspired the writer of the above, yet, it must be said that in a great city like New York, the scheme is utterly impracticable. There is no reason why the general management of the dispensary system should be disturbed, as all that is needed is that the circumstances of every applicant be rigorously investigated.

But, it must not be supposed that the average charitable dispensary is alone responsible for the present wretched state of affairs. The medical colleges and their feeders are the greatest sinners. Clinical material in shoals is what they are looking for, and that they must have come how it will. Some of our teaching institutions have gone into the daily press and clamored for patients "to attend the free clinic on venereal diseases" by Professor So-and-So. Others have given a free lunch at the noon-day hour and have opened on Sundays so that the poor (?) working people could avail themselves of the free treatment. The house-to-house vaccination by the board of health is an iniquitous practice, and is an impudent invasion by the poorly paid city official into the homes of the family physician's patients.

The ambulance system has been greatly overdone of late years in New York. Rich hospitals keep ambulances ready at a moments notice through the telegraph or telephone, to dispatch to the scene of injury—with the result that New York is so stripped of its traumatic surgery that many practitioners will only rarely even see a common fracture.

Now, what shall be the remedy for this state of affairs? That question is easier asked than answered.

Nothing will at all reach the root of the

evil short of drastic measures. First in importance comes *organization*. But, unhappily, of all professions there is none so indifferently united as the medical. Without any stretch of the truth it may be said to-day, that no inconsiderable number of its members subsist through pirating, through a total disregard of all amenities and ethics.

The next measure is *discipline*. But discipline cannot be maintained without a fixed set of rules; or, in other words, a *code*. But codes have become unpopular and a species of Nihilism is rapidly growing in favor.

As a last resort, when all other means fail, then the general practitioners must combine to enforce their demands through such means as special cases require. And in no way can this be more effectively accomplished than through an independent medical *press* and professional opinion. The medical colleges are strongly entrenched behind faculties, which dominate in the manipulation of medical societies and wield a controlling influence in many medical journals. The mammoth dispensaries are strengthened by large endowments, and all with few exceptions are tributaries to the colleges. But the united profession in any city or state, by concerted action can promptly paralyze the most audacious and powerful of them by such methods as will quickly empty their numerous benches. Not by threats and idle vaporings, but by prompt and decisive action. Let the profession prescribe the conditions under which the dispensary patient shall be treated, and watch with a vigilant eye, that they are enforced with rigor. Should any one of these eleemosynary institutions deliberately defy or disregard these restrictions, then there should be no time lost in putting the screws on. Cut off their supplies, withdraw the medical staff or expel from fellowship every member of the profession connected with them. Let this hospital and dispensary building cease, and let those railroad magnates and many millionaires in America, divide their wealth among their poor relations; or with the poor half-starved, destitute, homeless orphan children; among the destitute, helpless aged. But in Heaven's name let them disabuse their minds of the impression that in constructing palatial hospitals, they are in any degree whatever advancing civilization or the interests of an industrious and independent community.

—*Un Avant Courier.*

Definitions of a Baby.

A London paper offered a prize for the best definition of a baby. The last one of the following took the prize:

"The batchelor's horror, the mother's treasure, and the despotic tryant of the most republican household."

"The morning caller, noonday crawler, and midnight brawler."

"The only precious possession that never excites envy."

"The latest edition of humanity, of which every couple think they possess the finest copy."

"A native of all countries, who speaks the language of none."

"About two inches of coo and wiggle, writhe and scream, filled with suction and testing apparatus for milk, and automatic alarm to regulate supply."

"A quaint little craft called Innocence, and laden with simplicity and love."

"A thing we are expected to kiss and look at as if we enjoyed it."

"A little stranger with a free pass to the heart's best affections."

"That which makes home happier, love stronger, patience greater, hands busier, nights longer, days shorter, purses lighter, clothes shabbier, the past forgotten, the future bright."

"A tiny feather from the wing of love, dropped into the sacred lap of motherhood."—*Medical Brief.*

No False Modesty.

Lady—This is the second time you have received food from me, isn't it?

Tramp—It is, Madame; and you are at liberty to mention the fact to your friends, if you wish.—*Puck.*

THERE are now fifty-five towns and cities in England which destroy their garbage and solid refuse by burning, and 570 furnaces are employed for this purpose. In many cases the heat from these furnaces is used to produce steam, and the power is employed in pumping water and running electric light and power plants, and for other purposes.

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SATURDAY, DECEMBER 23, 1893.

EDITORIAL.

N. B.

Beginning with the new volume, the subscription price of the MEDICAL AND SURGICAL REPORTER will be reduced to three dollars per year. There will be no other radical change. The REPORTER will maintain all of its present distinctive characteristics, and make every effort to further enhance its value to the medical practitioner. In a word, the REPORTER as hitherto sold for five dollars will hereafter be sold for three.

This change has long been under consideration and we believe that the present "tide in the affairs of men" is that "which taken at the flood leads on to fortune." Note the signs of the times: A great and progressive profession is demanding frequent and trustworthy information of all that is doing or making in the medical world, without the necessity of wasting valuable time and needed resources in blasting out what is of value from innumerable and often questionable journals—and there is a stringency in the times that makes every dollar received in cash by the physician appear to be worth two hundred cents. To meet these conditions is a weekly journal of established reputation and success, owning its own plant, buying supplies direct from the manufacturer, saving all profits of middle men, thus largely reducing the cost of production; ambitious to reach every intelligent physician in English-speaking countries; determined that every issue shall contain some thing of present value to every reader of its pages; whose columns are not made up of advertiser's reading notices; which believes that there is so much of value in medical science that it will spare no space for unnecessary professional or personal disputes, nor for the discussion of subjects which are unprofitable unless strictlyscientific; which receives contributions from all sources and makes

due return for such as can be made use of.

No other first-class medical weekly journal has dared such an undertaking. It requires faith to voluntarily surrender two-fifths of one's income and discount the future, but the REPORTER can confidently give reasons for the faith that is within it. The REPORTER is one of the oldest medical weekly journals in America. From its inception it has received a cordial and hearty support from the profession. It has kept faith with its subscribers, and honestly earned the position of influence and authority it now maintains. Forty years ago the REPORTER had few competitors in the field of medical journalism. Now it requires a microscopic search to discover "any long felt want" that can serve as an excuse for a new journal. The very last "need" is now met by the REPORTER—a strictly first-class medical weekly at a price obviously within the reach of every medical practitioner determined to be abreast the times in his profession.

TRANSLATIONS.

IN CHARGE OF M. B. WERNER, M. D., AND W. A. N. DORLAND, M. D.

CONTRA-INDICATIONS AND INDICATIONS FOR SEA-BATHING IN CHILDREN.

Sea baths which produce a remarkable effect in certain children, writes Dr. J. Simon, (*Revue Medicale*, June 25, 1893), are very harmful in others, for example, in rheumatics and in nervous children. When one has employed the sea bath at random in many nervous children from the experience thus obtained formal contraindications may be laid down to their employment. Simon says that it is a mistake to give a cold sea bath to children under two years of age. Of course there are exceptions to this rule, but in general they are very badly impressed by cold water, and, as aged persons, do not react well. The sea bath is also contraindicated in nervous children, those who are called irritable, in children who are incessantly in excitement, in those whose intelligence is continually alert, whose sensibility is exquisite and whose sleep is light. Sea-bathing increases the excitement of such children, diminishes their amount of sleep, and renders them absolutely unbearable. Epileptics, hysterical children, and those with chorea are equally badly influenced by sea-bathing. In such, the crises which have disappeared while far from the sea-coast, invariably return after sea bathing. Sea bathing and bathing in water in the vicinity of the sea are alike sufficient to produce the phenomena of cerebral and spinal excitement in children affected with cerebral sclerosis and paralysis. Rheumatics, with or without cardiac lesions, children subject to torticollis, and to the so-called growing pains ought not to be taken to the sea-shore. Acute and chronic ophthalmia, diseases of the ear, and all of the cutaneous affections are contra-indications to sea-bathing; also pulmonary tuberculosis in its incipiency, and most of the pulmonary diseases and kidney troubles are harmfully influenced by it.

Sea bathing seems to the author to be indicated in certain forms of tuberculosis, notably in the adenopathies, the arthrites, and in Pott's disease. The indication for sea bathing is especially absolute for the subjects of rachitis, who find themselves marvelously benefitted at the sea-shore. It is also advisable to carry to the shore children convalescent from grave diseases, those with anemia and chlorosis. Arrived at the sea-shore the children should rest for from five to six days before commencing the baths; the first bath should be short, not lasting more than a few seconds, and even when they have become accustomed to the bathing they should not remain in the water more than five or six minutes.—D.

ABSTRACTS.

THE MORAL IMBECILE.*

DR. I. N. KERLIN, Elwyn, Pa.

An experience of thirty years in the care and training of feeble minded children has brought to my observation a group of cases quite distinct in their symptoms of derangement, and requiring forms of discipline quite unusual as compared with those applicable to the children ordinarily recognized as idiotic. Two of these, studied twenty-five years ago, have been followed by experiences with others, so that now in a population of 740 inmates we differentiate 16 as belonging to this special group and 90 others who merge into it.

Besides these who have been under daily study and discipline, many more have been brought to our knowledge through correspondence,—a correspondence revealing the agony and unrest of as many homes, caused by the baneful and incomprehensible misconduct of certain children in whose interest the most pathetic appeals have been made.

The symptoms marking the diseased lives of these scores of children have been confined either mainly or entirely to aberration of the "moral sense," with either no deterioration of the intellect or, if slight, such as could be considered secondary only. These phenomenal disorders have dated from temper explosions, night terrors, and most remarkable obstinancies observed in infancy and early childhood, or may have originated in a marked and well-remembered febrile attack, associated with some infantile disease and accompanied perhaps with convulsions, or, more rarely, may have followed a markedly nervous and precocious youthhood too suddenly reaching a serious climax at puberty. The fundamental disorder is manifested in derangement of the moral perceptions or emotional nature rather than in the intellectual life, which not infrequently is precocious. Unaccountable and unreasonable frenzies, long periods of sulks, and comfort in sulking; motiveless and persistent lying; thieving, generally without acquisitiveness; a blind and headlong impulse toward arson; delight in cruelty, first toward domestic pets, and later toward helpless or young companions; self-inflicted violence, even to pain and the drawing of blood; occasionally, delight in the sight of blood; habitual wilfulness and defiance, even in the face of certain punishment; a singular tolerance to surgical pain and hebetude or insensiblity under disciplinary inflictions,—these are some of the forms in which the congenial deficiency of the moral sense evidences itself. It is hard to answer, "What is there in all this to distinguish from simple wickedness or badness?" unless the answer is contained in the persistency of the trait and the utter destitution of any reason for it, as is indicated in the confessed helplessness of the child to do differently. As a further aid to the diagnosis, we may refer to the fact that in one class of these cases the conduct is the reverse of what might be expected from the environment in which the child has developed; or, on the other hand, the ancestral and prenatal history of the child is such as to project a strong light for the interpretation of this condition as that of a neurotic inheritance.

Of the several children observed at Elwyn, quite frequently they are of faulty stock, presenting the gravest statistics of inebriety, epilepsy, acknowledged insanity, and in some instances even crime.

During the thirty years' contemplation of the subject, a marked change in professional opinion has been noted, so that it is no longer hazardous to reputation to believe in the existence of a condition termed "moral insanity" nor to refer to it as of commonly congenital origin, and hence better denominated "moral imbecility."

In Germany, both the legal and medical professions accept quite unanimously the doctrines of moral imbecility. The most enlightened minds of England have embraced them, and, many in America are their advocates.

A distinguished judge of Pennsylvania has so far amended his habit of thinking

*Reprinted by request, from the 17th Annual Report of the National Conference of Charities and Correction, held at Baltimore, 1890.

as to agree with an eminent English judge who, "after many years of constant administering of the criminal law, was compelled to admit that, in a large majority of cases brought up for sentence, he himself would have committed the same acts if he had descended from the same stock and been subject to the same surroundings in early life"; and so far has this former gentleman progressed in this, to him, new line of thought as to have added: —

The helpless classes — lunatics, imbeciles, and criminals—all call for our sympathy as well as our care. They are all to a greater or less extent the victims of circumstances from which the more fortunate humanity escape. There is no sharp dividing-line between these three. The ranks run into one another, and the individuals are readily interchangeable from one rank to the others. There is a moral defect in all of them, often also a physical defect. Call it moral insanity, or what we will, it runs throughout all moral imbecility, the helpless classes, and is the main element in their helplessness. Being unable to govern themselves to the extent required by the public good, it is our duty to govern them, and that without unnecessary harshness or cruelty.

Confirming testimony of these views was most abundantly given at the recent Second International Congress of Criminal Anthropology in Paris, at which were assembled distinguished representatives of science, law, medicine, and the administrative world, from France, Italy, Russia, Holland, Belgium, the United States of America, Denmark, Sweden, Roumania, Servia, Brazil, Mexico, Peru, Paraguay, and Hawaii. Sentences were there uttered so replete with originality, and so applicable to the subject we treat, that to quote them, even in the most abridged terseness, will give this paper its best value. Brouardel said: "It has been to the honor of the Italian school, in the land where Roman law, the foundation of all law, was born, that it has again put into the crucible the problem of criminality, and that it has proceeded to the analysis of that problem by the only truly scientific method, by studying the psychology of criminals, and their pathological abnormalities. It will be its distinction to have declared against illusory enthusiasm, and to have founded a science which will contribute to the more efficacious protection of society."

Lombroso, another leader of the Italian school, "summarized what he believed to be the most important abnormal physical characteristics found among criminals,—the presence of cranial and fascial asymmetry, precocious synosteosis, unusual frequency of left-handedness, large orbits, prominence of the zygoma, large median occipital fossa. These characters, he considered, were all due to pathological causes."

Lacassagne pointed out "the too often forgotten factors of misery in the production of crime," but added "that he meant not social misery alone, but physiological misery of which the origin was intrauterine."

Benedickt, the Russian, with the forcible language born of elaborate examinations of the brains of criminals, "declared the criminal to be a diseased person or a lunatic, in whom we must consider the molecular troubles of the cerebral substance as well as the external signs."

Garofolo, an eminent Neapolitan lawyer, said, "Criminal law must be treated as a detached and isolated science: it must be subordinate to psychology and anthropology, or it will be powerless to interpret and determine, in any enlightened legislation, the true classification of criminals."

M. Ferri summed up an able paper on the "Determining Condition of Crime" with the conclusion "that we must on the one hand ameliorate social conditions for the natural prevention of crime, and on the other hand exercise measures of temporary and perpetual elimination of individuals, according as the biological conditions in each case seem more or less curable."

M. Alimena attached great importance to education, especially its hereditary influence: "The criminal ought not to be able to say to his judge, 'Why have you not made me better?'" He agreed with the words of Lacassagne at the first Congress, "Societies have the criminals they deserve." M. Taverni had made a number of investigations on children in reformatories,—a study which he called pedagogic biology,—and had traced backward the childhood of criminals, and forward the career of unpromising children. The chief indications he had found in the childhood of criminals were inap-

titude to education, resistance of family order, and revolt against social conventionalities. Among adult criminals are found in their childhood the same characteristics of inaptitude and resistance. M. Magnin, with a corresponding large experience, said, "The child is already often a complete criminal, as the result of physical and moral degeneration due to nervous, insane, or alcoholic heredity."

But nearer home we find apt delineations "moral imbecility." Lyman P. Alden of the Rose Orphan Home, Terre Haute, Ind., in his second report, and as his summary of experience covering many years, speaks of a group which he has encountered in his reformatory work, as follows:—

But there is a third class for whom little can ever be done. Congenital and hereditary evil propensities are so powerful that all human agencies are too weak to cope with and arrest them. With now and then an exception, they are the children of degenerate parents, the consequences of whose sins they are now bearing. Not every child of evil parents will be bad, by any means, any more than every child of good parents will become good. But the strong tendency is all that way, as every intelligent, observing superintendent of children's institutions must have observed. These are the children that, in spite of all our efforts to rescue them, will finally go to swell the class of prostitutes, paupers, and habitual criminals. Love, kindness, rewards, encouragements, warnings, entreaties, and punishments are equally ineffective, except as temporary restraints. The vileness and evil that are packed in some of them would be incredible to those who have never become acquainted with this class. What shall be done with them it is hard to say. Sent back to their homes and old associates, their downward course is rapid. To place them with nice families is an imposition on the families, unless they are informed of the facts; and then few would take them. Whenever institutions have sent such children out to homes, they are soon returned, worse than ever. To keep them in the institution endangers the morals of the other children as well as its peace, harmony and good order. But, fortunately, of this hopeless class there is not a large number, less than five per cent.; and, if at last they fail to become good citizens, it cannot be charged against society that they never had any chance.

And again, before this body at its meeting in St. Louis, in 1884, Dr. J. D. Scouller described with prolific illustrations this third class of the reformatory population, "as the boys will make our criminals, who will be our law-breakers; the boys who love the world, the flesh, and the devil;" those of whom Solomon says, "You may bray them in a mortar among wheat with a pestle," but you will only damage the wheat. Their souls are as impressionable to gratitude as the granite slab to the rays of the sun. They are always innocent of the crimes charged against them. He correctly says: "They are not all from the criminal ranks. We find on examination that there may be perhaps twenty per cent. from respectable and well-regulated homes, thirty per cent. from the careless, undisciplined, but not necessarily criminal families, and fifty per cent. from the criminal classes of society."

Ladies and gentlemen, if we would come to the conclusion that we have a class of little children whose heredity and aberrations are such as to make them the predestined inmates of our insane hospitals and jails, what an advance we would make in the diminution of crime and lunacy by a methodized registration and training of such children, or, these failing, by their early and entire withdrawal from the community!

Instead of so much interest being centered about the seventy-five per cent. who are discharged annually from your refuges, alleged to be reformed and fit for society, a no less interest would be discharged on the black residuum of 25 per cent. who are also discharged, to be as yet unaccounted for in the statistics of refermatory work, but, pariah-like to add a contribution of evil to society which will shadow, if not eclipse, the accredited value of our whole reformatory work.

Cannot an almost unerring decision be made by the trained and humane experts of our asylums, jails, and reformatories, by which the indeterminate sequestration, under the best conditions for their moral and physical welfare, shall be the practice of those who are congenitally unfit to mingle their lives and blood with the general community?

The various Ladies' Aid Socioties of

the country, the associations for the protection of children from cruelty, and many other organized charities, are all working in the right direction, in gathering out from unfit and barbarous homes the ill-bred and misbred nervous children of coarse and brutal stock; for it is now quite recognizable that a drunken or criminal parentage is not fit to rear its ill-gotten progeny. But it is less recognizable that a fussy parentage is ill qualified, too, for the training of its nervous oversensitive, and spoiled progeny. The societies referred to are doing their utmost primarily to domicile unfortunate children in private and considerate homes, and, unsuccessful in this, to endow our foster homes, refuges, and institutions for the defective with a liberal clientage. It is only a step farther to analyze this heterogenous mass into "curable" and "incurables," and to restrain the undue haste in thrusting the incurable out upon a world for which they are utterly unfit, where they poison and contaminate as many more, and, after taxing society with their prolific and indiscreet reproduction, are drifted at last into poorhouses, jails, and hospitals of the commonwealth.

The practical thought I have to offer from this is: let us recognize "congenital moral imbecility" as a terrible fact.

Let us accept this moral imbecility as the incurable infirmity of an irresponsible victim, to whom, as the piteous cross-bearer of the sins of society, we owe kindly nursing and protection against himself by a grateful and total withdrawal from the community, which, in its turn, has a right to demand that he shall not scathe our common stock with permanent taint in blood and *morale*.

Let us widen our thought so as to include under the great generic class of imbecility not only the accepted physical and intellectual forms, which are now so obvious, but also this sadder and more dangerous group, which, neglected and misunderstood because of our ignorance or hardness, is sapping our mental and moral vitality.

And, as a further practical suggestion, I wish to add that any general State institution for the care of the feeble-minded should embrace a department for the care of the *moral imbeciles*. They can be indentured to work. They can, so far as their stolid natures will permit, be best drawn into sympathetic relations by contact with helpless idiocy, and be made to contribute toward its nourishment. They need not necessarily be taught to read and write; for the school, as ordinarily kept, contributes to their deterioration. Intellectual entertainment for these people is best provided in the exercises of the shop, the field, and garden. They take aptly to theatricals, base ball, cornet, orchestral and vocal music; and these, with kindred amusements, should be the indulgences granted for good behavior and for the uplifting and general "good of all." I trust there are some—yes. many—in this Conference who may see in these suggestions a line which followed will lead to the relief of many of our institutions, to a better understanding of this worst form of moral perversion, and to a partial arrest of the apparently increasing degradation of our race.

CHILDREN should be trained to eat slowly, no matter how hungry or what important business is pressing. Much safer a little food well ground than a hearty meal swallowed in haste. Cold food is even more difficult to digest than hot, if taken too rapidly. The normal temperature of the stomach is about ninety-eight degrees; food has to be raised to this temperature before digestion can take place.—*People's Health Journal.*

DR. MARY A. SUGANUMA has been granted permission by the Japanese Government to practice as a physician in Nagasaki. Dr. Suganuma is an American woman who was graduated from a medical college in Ohio. She became a Japanese subject, on her marriage with Mr. Suganuma, a government official in Osaki. Dr. Suganuma is the first woman physician permitted to practice in Japan.
—*Boston Woman's Journal.*

I have oft heard people say,
"O wad some power the giftie gie us"—
(Quoting from an old Scottish lay)
"To see oursels as other see us."
But I would far more happy be
If some fairy, witch or elf,
Would make the other people see
Me, just as I see myself.
—*H. Dodge Tichenor, in Life's Calendar.*

THE THERAPEUTICS OF CROUPOUS PNEUMONIA.

Dr. Larrabee, (*Jour. Amer. Ass.*) says:—In the discussion of the therapeutics of cropous pneumonia, I recognize the importance of tabulating only those means which through a long period of time have proven valuable in the hands of the writers. The value of papers of this kind, is in direct proportion to the truthfulness of the statement therein contained, and to the careful clinical observation and and experience of the author. In treatises designed for text-books, it is quite proper that all the known therapeutics, both practical and speculative, should be compiled, the endorsement of which is not made by the author and little of which has been the result of his experience.

I shall, therefore, make no attempt to enumerate the so-called remedies for this disease, however much extolled by others, nor shall I criticise those which in the experience of others have been valued. I recognize various therapeutic roads leading to the same desired terminus, and I care as little what means may be employed by others equally skilled, as I would to know with what tools a carpenter has completed my house, if he has completed it according to the plans and specifications.

Regarding pneumoniæ croupose as an acute, infectious disease, running a definite and limited course with a pronounced tendency to recover by natural processes alone, I might be expected to say very little concerning its therapeutics.

Notwithstanding the fact that medicines are powerless to cut short the disease, and the conviction expressed that very many will recover without any medication, few physicians possess a clientele of sufficient intelligence to risk a trial.

For this reason, as well as to favor the course of nature in repair, I constructed the following prescription some twenty years ago, since which time I have made it the sole treatment from the beginning to the close of the attack.

Moreover, it has been given as a part of my instruction to medical classes for nineteen years, and it is safe to say that at least a thousand practitioners have made it their chief reliance and have so expressed themselves to me by letter or person.

The indications—therapeutical—which are met by their combination are:

1. Satisfaction on the part of friends, that something is being done for the patient.
2. The satisfaction on the part of the practitioner that he is not doing harm to his patient.
3. The promotion of diuresis.
4. The promotion of diaphoresis and increased elimination of carbonic acid with reduction of temperature.
5. Increased alkalinity as shown by urine and a lessening of fibrin in the blood, promoting free mucous secretion and lessening the tendency to coagulation of blood.
6. Gentle, but diffused stimulation of the nerve centers, favoring sleep and preventing spasm.

℞ Spts. eth. nitrosi.
Potassæ. acet.....āā—℥jss
Spts. mindereri .....
Aquæ. camphoræ ..... āā ℥iij

To be left with slightly acid reaction as shown by litmus. M. ft.: Adult, dose, tablespoonful; child, dose, teaspoonful, every two hours.

To this may be added tr. aconit or veratrum if needed, and in convalescence tr. ferri chloridi. Such additions always to be made as extra doses and not a part of the prescription.

Death approaches the sufferer from croupous pneumonia always through the heart. For this reason it is of the utmost importance to watch this organ, from the inception to the close of the disease. With the trained finger upon the pulse and the educated ear over the precordia, we catch the first signal of danger. To be forewarned is to be forearmed. Nothing is more essential to the cardiac therapeutics than a knowledge of the mechanism of heart failure in pneumonia. *Pari passu* with the consolidation of lung and in direct proportion to its extent, we have a mechanical obstruction to the transfer of blood from the right to the left heart, and added thereto the addition of carbonic anesthesia to muscle and frame. This occurs at a time when ptomaines from vegetable diplococcus are in circulation and before the anti-pneumotoxin has been formed in the albumen of the blood. More blood is coming into the right auricle than can be forced through the lung by the ventricular stroke. The right ven-

tricle becomes so distended that the apex beat is completely removed from its original site, between the fifth and sixth ribs, and the ear placed over the heart detects a heavy dull sound, while percussion reveals an increased area of dullness. In this condition the indications for improvement in the circulation become extreme and pressing. How shall this be best accomplished? It is philosophical to attempt relief by a vis-a-tergo, or is it more rational to attempt a vis-a-frontis? Are these the indications for the employment of digitalis? It may be a good plan to goad the tired ox that has fallen in the furrow if you want a little more work, but you will kill the ox. It may be good therapeutics to stimulate a diseased kidney if you want a little more urine, but you will have a little less patient. It may be good practice to give digitalis to a fagged out heart in the stage of hepatization of croupous pneumonia, but I doubt it. Digitalis stimulates a weak heart by contracting the arteries and arterioles, by throwing the blood back upon the heart itself, and where there is no pulmonary obstruction the action is prompt and efficient, as in valvular patulences, etc., but the very condition which is killing the patient in pneumonia would be rendered still more dangerous by such an agent. Our fathers did eat manna in the wilderness and they are dead, but is it strange that venesection should occur to the mind as a possible solution of the question? Experiments in venesection have demonstrated that a heart brought to a standstill in such diastole may be revived by aspirating the right ventricle.

It has been ascertained that even ligation of the lower extremities just sufficient to prevent the return of venous blood, is followed by immediate relief to the heart. In the same manner is the explanation of the sense of relief felt by the patient upon the application of dry cups and hot flaxseed poultice to the chest walls. Pediluvia would also prove of service, were it not for the ever present danger of assuming the erect position.

Notwithstanding it comes to us as a voice from the past, there is to-day much truth in the statement that "blood-letting is good in pneumonia." Bleeding and tartar emetic marked the heroic treatment of the sturdy yoemen of the early nineteenth century, and yet we find from statistics that the mortality for 1822 to 1832 was 10 per cent., while from 1880 to 1890 it was 18 per cent.

Without attempting to revive a therapeutic so long abandoned and so universally condemned, it must be admitted that those old-time doctors struck some underlying principle in therapeutics which we, with all modern accomplishments, have failed to recognize. That principle was the relief of the over-burdened heart. I propose, therefore, to demonstrate how this same desirable end may be obtained without jeopardizing the life of the patient and without inflicting upon him a long and tedious convalescence.

I.—By agents which determine the blood to the skin. This may be accomplished by the warm pack, which, applied at a temperature of 98½°F., and protected by light woolens, envelops the body in an atmosphere of steam. By this means the peripheral nerves are soothed and almost invariably this procedure is followed by quiet sleep.

II.—By belladonna. This time-honored and faithful servant of materia medica is too often lost sight of in practical therapeutics. It has a place in all hyperpyrexias accompanied by paleness of the skin and in low stages of fever. It is particularly adapted to the condition under consideration, being an indirect stimulant to the heart, diminishing the blood pressure by dilatation of the capillaries. It is also a stimulant to the respiratory centers of the brain, thereby inducing a more perfect æration of the blood. The comparative harmlessness of this remedy in infancy and early childhood enables us to push it quite up to its toxic effects. It has done me yoeman's service in many an apparently hopeless case of threatened cardiac failure in pneumonia.

III.—Nitro-glycerin and the nitrites may be expected to rescue a heart after the manner of aspiration, taking off the pressure and flushing the skin, even when brought to a standstill in the diastole of a full right ventricle. Aconit and veratrum viridi certainly have a place in the treatment of pneumonia; the former, being a sedative from the start, is too dangerous for administration by continued dosing; the latter is safer than digitalis. Fothergill's statement that "digitalis is both spur and oats to a heart," is preëminently

true, and in low forms of fever where the adynamia is due to long-continued hyperpyrexia. I have attempted to show that the mechanism of cardiac failure in pneumonia has its foundation in an entirely different pathology. I have been led to these conclusions by clinical observations and not by theory.

Finding that in this disease alone I failed to obtain the usual slowing and filling of the pulse in the radial artery, I began to investigate the cause of the failure of this grand old drug so generally serviceable in crippled hearts.

Alcohol will prove a far better cardiac stimulant in pneumonia, by reason of its power to dilate the capillaries, thereby retaining more blood in the skin, while at the same time it may have some value as a respiratory food.

IV.—Applications to the chest. The feeling that something may be accomplished, at least for the comfort of the patient suffering with pneumonia, by local applications to the thorax is universally believed by the laity. No doubt this idea had its origin in individual experience in many painful diseases. Shall they be cold or hot, moist or dry? Heat is a stimulant and cold is a sedative. Heat relieves pain under any and all circumstances. Heat locally applied is a powerful stimulant to the heart, and, by its action upon the vaso-motor nerves, lessens active hyperemia of the brain.

Physiologic experiments made upon the heart of a frog show that pulsations may be restored after a complete cessation by the application to this organ of a bit of cotton wrung out of very hot water, but they are again arrested by the application of cold. I prefer warm to cold applications, although some authorities, particularly Germans, speak favorably of cold, and even ice packs in the treatment of pneumonia. The choice is between poultices and cotton batting, protected by oil silk.

Those of us who have experienced the relief of a congestive headache by a warm foot bath containing mustard, are best prepared to answer this question. Is it probable that the same relief would follow putting the feet in cotton batting instead of hot water? Poultices are rarely properly made and seldom properly applied. Moreover, they are, at best, a very clumsy application, and by adding weight to the chest walls embarrass still further the labored respiration. A towel wrung out of very warm water wrapped once or twice around the chest and neatly covered by oiled silk is a far more elegant and comfortable application.

By this means the entire thorax is surrounded with an atmosphere of equal warmth and moisture, the superficial vessels are dilated, pain is relieved and repair hastened. Stimulating embrocations are also of benefit and are useful in proportion to the chronicity of the case. The following prescription is a favorite of mine:

℞ Ol. succini rectificati..... ʒss
Ol. caryophyli..... mxx.
Liniment saponis..... ℥iiss.
M. ft.

Cough is a constant accompaniment of pneumonia. At first dry, frequent and distressing, it soon succumbs to consolidation of the lungs and returns with commencing resolution. This return is hailed with pleasure by the physician and with unnecessary alarm by the laity. Perhaps it is the latter observation which has led to the employment of expectorant mixtures, most heterogeneous in composition and most therapeutically incompatible in application. These mixtures generally contain the entire list of so-called expectorants in the materia medica. Ipecac and squills to loosen, senega and ammonia to stimulate, wild cherry and other tannates to cheek secretions, alkalies to lessen viscidity of mucus and opium to benumb sensibility. Some of these prescriptions are a pharmaceutical curiosity. Yet one meets with them with such frequency in consultation practice that it would appear that reform in this direction is making slow progress. Such mixtures do little more than destroy the appetite and disgust the patient. Water, given in abundance, and at short intervals, is the best expectorant required. In cases of children, about the time of crisis of pneumonia with restlessness, cold extremities and pinched features I have seen great good from tincture of assafetida with whisky toddy. As a protection to the chest during convalescence a neatly fitting vest made of one layer of carded wool or absorbent cotton quilted and covered by oiled silk should be worn upon the chest.

It is probably the observations of others bedsides myself, that purgatives administered during the stage of hepatization

of a lung are bad. I have so often been called to cases made worse by the officiousness of some grand-dame, whose desire to purge amounts almost to insanity, that I am able to detect such interference by the collapse that has followed. I can give no explanation other than that purgatives add to the general depression at a time when the child is poorly able to stand it. If the bowels need attention they should be moved by simple enematæ.

The enthusiasm for the treatment of high temperature so popular a few years ago, has, in a large measure subsided, and it may now be said that thermometric observations are less liable to plunge us into therapeutic errors than formerly.

I have never participated in this "Don Quixotic" fight of temperature, to the extent of allowing it to control my therapeutics, but have been content to treat hyperpyrexia alone, and always in relation to other existing symptoms.

In catarrhal pneumonia I am guided altogether by respiration ratio; in croupous pneumonia by the pulse ratio as compared with temperature.

It is exceedingly rare that I find a hyperpyrexia which does not yielded to the warm bath or the warm pack, which I greatly prefer, and to the "tubing coils," known as my invention.

Some danger always attends upon the patient suddenly assuming an upright position in pneumonia, on account of the sudden strain placed upon the heart. I have more that once seen an immediately fatal result following such a procedure. Hence the preference of the pack to the bath. As I grow older in the profession and more experienced in practice, I am less courageous in the use of heroic measures. I must confess to a timidity in the use of the socalled antipyretics known as the coal-tar products or derivatives so highly praised by many excellent physicians. Reduction of temperature, however desirable, ought not to be purchased at the expense of de-oxidation of the blood in pneumonia.

CEREBRAL SYMPTOMS.

Previous to the investigations of Sternberg and Frankel and the discovery of the diplococcus or pneumococcus of Friedlander, cerebral pneumonia admitted of no rational explanation. Various theories, in themselves ingenious, were made to account for the intense cephalalgia in adults, and for the initatory convulsions of croupous pneumonia in infancy and childhood. It was at one time thought that cerebral manifestations were more frequently associated with apex consolidation and I, myself from observation, was inclined to corroborate this statment.

Prof. J. Lewis Smith recording his own valuable experience during an epidemic of cerebro-spinal meningitis in 1872 in New York city, makes a special mention of the great increase in the number of cases of croupous pneumonia prevailing at the time. He evidently recognizes a pneumonic from cerebro-spinal fever. I have many times witnessed the recession of typical cerebro spinal symptoms *pari passu* with the development of consolidation of the lung. In infancy these cerebral symtoms, marked by convulsions and vomiting, are so common an accompaniment of croupous pneumonia that one is never warranted in pronouncing upon meningitis without a careful examination of the chest. I am convinced that nothing but clinical experience will prevent young practitioners from making this serious error, so completely do the brain symptoms overshadow those of the pneumonia. In etiology, however, they do not differ from the symtoms produced by alkaloidal products of the microorganisms — toxalbumins — in other disease circulating in the blood, e. g., scarlatina, smallpox, measles and typhoid fever.

So soon as the characteristic lesion of these diseases becomes established, these so-called brain symptoms subside as rapidly as they came. With this etiology it is scarcely possible that one will be found administering drastic cathartics or applying leeches to the scalp. Bromids and chloral are also of doubtful propriety.

The warm bath, the warm wet pack to the chest and tubing cap to the head, is almost certainly followed by relief, quite sleep and by reduction of temperature, which is also a factor in disturbances of the nerve centers by no means to be lost sight of in our therapeutics.

So long ago as 1880, in my lectures, I stated that the sudden and remarkable change which occurs usually from the fifth to the seventh day, known as crisis must have some other explanation than the subsidence of inflammation. Auscul-

tation and percussion so frequently revealed no improvement which could reasonably account for such a change; for days after convalesence was established the local lesion could be readily demonstrated.

The study of the micrococcus pneumoniæ crouposæ and its product, pneumotoxin, has led to the discovery of a so-called anti-pneumotoxin, supposed by the celebrated German scientists, the Klemperer Brothers, to be antidotal to the former. The opening of this window certainly throws a flood of light into a dark recess. Should the fond expectations of these earnest investigators prove true, your patience will not be burdened in future by lengthy papers upon the therapeutics of croupous pneumonia.

The sick will be made to cure the sick, and the physician, armed with his hypodermic syringe, will act as a mediator between the two. Unfortunately, however, for all these beautiful theories which comet-like, dart across the medical sky, dazzling our vision, they are soon lost below the horizon, leaving us to "darkle in the trackless void."

In diseases which secure an immunity against a subsequent attack, we have a right to expect much from inoculation. Pneumonia in so far from securing exemption from future attacks, predisposes to them, and this has been the observation of physicians from time immemorial the world over. I have in my practice a patient who has had croupous pneumonia seven times in six years and whose life has been in jeopardy several times.

In conclusion, permit me to say that, while the majority of cases require little medicinal treatment, the successful practitioner will be on the alert to detect constitutional and hereditary weaknesses, in his little patients. The importance which attaches to diathesis can not be over-estimated. Pneumonia in a rachitic infant carries with it a far more grave prognosis than in a healthy child.

The strumous and tubercular diatheses entail a series of consequences peculiar to each. Delayed resolution in the lung and enlargement of the bronchial glands, indicate the use of potassium iodide and muriate of ammonia, with the daily application of tincture of iodin to the upper portion of the thorax.

Cod-liver oil with marshmallow emulsion, and the elixir lacto-peptine with tincture ferri chloridi and gentian have proven to be excellent reconstructive tonics.

Incubation.

Diphtheria, two to seven days; oftenest two.

Typhoid fever, eight to fourteen days; sometimes twenty-three.

Influenza, one to four days; oftenest three to four.

Measles, seven to eighteen days; oftenest fourteen.

Mumps, two to three weeks; oftenest three weeks.

Rubeola, two to three weeks.

Scarlet fever one to seven days; oftenest two to four.

Small pox, nine to fifteen days; oftenest twelve.

Further investigations were made with regard to the time and duration of the infective period.

Diphtheria was found to be infective during the period of incubation, attack and convalescence.

Mumps and rubeola are also infective for three or four days before the onset of the parotiditis and appearance of the rash.

The contagiousness of measles speedily disappears, and does not continue in disinfected persons for over three weeks.

Typhoid fever is infectious from the time of onset until two weeks after the fever has gone and convalescence set in.

As is well known, the contagiousness of scarlet fever varies greatly, but is generally continued a very long time—certainly until desquamation ceases, and sometimes as long as eight weeks.

If you don't want to be detested don't be a chronic growler.

The reason those people succeed so well who mind their own business is because there is so little competition.

Publisher (testily) —I can't see anything in that article of yours.

Author (vindictely)—I suppose not, but you may have some readers who are blessed with common intelligence.

THE LIBRARY TABLE.

BOOK REVIEWS.

A Chapter on Cholera for Lay Readers: History, Symptoms, Prevention and Treatment of the Disease. By Walter Vought, Ph. B., M.D., Medical Director and Physician-in-Charge of the Fire Island Quarantine Station, Port of New York; Fellow of the New York Academy of Medicine, etc. Illustrated with Colored Plates and Wood-Engravings. In one small 12mo volume, 110 pages. Price, 75 cents net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

This little book, destined to circulate among the laity, is replete with useful information, presented in a readable manner, and if carefully noted will no doubt achieve its purpose, by teaching many in aiding those so unfortunate as to be attacked by the disease, where the much needed element of rapid action often turns the scale in the direction of a life saved.

Recent Developments in Massage, Historical, Physiological, Medical and Surgical. Douglass Graham, M. D. Physicians Leisure Library. G. S. Davis, Publisher.

The author presents a concise book on the subject of massage, intended, he states, to be a supplement to his Treatise on Massage, issued in 1890. The chapter devoted to the physiological effect on muscle tissue contains useful hints, based upon experiments and experience, showing, that, by its use one can look for an improvement in nutrition, hence it will often counteract the effects of excessive fatigue, as well as prove useful in a great number of affections which are largely dependent upon faulty circulation, nutrition or excretion. There are useful suggestions in the nine chapters devoted to the practical consideration of its application to various diseases.

Cholera—Its Protean Aspects and its Management. Dr. G. Archie Stockwell, F. Z. S. In two volumes. Physician's Leisure Library. G. S. Davis, Publisher.

The author treats his subject with studious care. He is careful to avoid any enthusiasm which might lead astray from not only scientific study but research into the history of this dreaded scourge. His views upon bacillar pathology are best given in his own words. "The exponents of bacillar pathology depend solely upon hypothetical assumptions, ignoring all forms of evidence not adduced by themselves." "Their pathology is merely an experimental experience admitting of neither negations or offsets, their therapeutics, a form of still hunt with untried weapons, in an unknown jungle, after a hypothetical prey." "Indeed it is a sad travesty upon medical science, when authors and would-be teachers wantonly assert rabies, cholera, yellow-fever, dengue, tetanus, endocarditis, pneumonia, etc., are diseases whose microbic origin is positively known, when two of these are supported only by manifest fraud, in two more the evidence has never been adduced in any form, and in the other three it is of the most flimsy superficial character."

The treatment advocated is one of general stimulation and directed principally to the vagus; the utility of this being shown by reporting certain cases in detail. While the opinions set forth differ in many particulars from those of recent writers, yet they deserve careful reading at the hands of those who desire to learn.

Electro-Therapeutics of Neurasthenia. W. R. Robinson, M. D. The Physicians Leisure Library. G. S. Davis, Publisher.

The author in this small volume considers the causes of neurasthenia, their classification and how they should be treated by means of electricity which he regards as the true nerve tonic. The dose, if it might so be called, is largely dependent on the susceptibility of the patient and the good judgment of the physician as well.

The author devotes special chapters to the three principal forms of electricity and their uses. He however, feels that there is often a necessity to combine with such treatment, other remedies; also he advises calling in the surgeon if local mischief exists, which is only amenable to the careful and conscientions use of the knife.

Treatment of Obesity by an Exclusively Nitrogenous Diet and Copious Libations of Water.

Savill and Haid (*Lancet of Pittsburg*) recommend the following treatment for pronounced obseity: The individual is restricted to a purely nitrogenous diet, consisting of one pound of cooked fish and one pound of lean meat per day, and a pint of hot water must be drunk at intervals of two hours. Aside from this, no other article of diet whatever must be taken. The meat and fish may be taken at regular intervals, as suits the case. Five or six pints of water should be taken during the day. The hypothesis on which this treatment rests is that the patient supplies the needful hydro-carbons, which are withheld from his diet, thorough absorption from his own body. The ingestion of the large quantities of hot water is likewise supposed to exert a beneficial influence in some unexplained manner. This should be continued even after the patient has returned to ordinary diet, from which, however, potatoes and especially beer are exculed. It is not unlikely that the large quantities of water tend to overcome the renal disturbances which often manifest themselves when an exclusive nitrogenous diet is adopted with the ingestion of the ordinary amount of water only.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D.

THE AMERICAN JOURNAL OF OBSTETRICS for December. Dr. Richard B. Maury contributes a paper on

The Present Status of our Knowledge of the Pathology of Pelvic Inflammation,

dealing especially with the treatment of pelvic abscess. The question as to whether cellulitus ever exists pure and simple, unassociated with pelvic peritonitis, he answers in the negative, and emphasizes the statement that suppuration of the cellular tissues of the pelvis is rare as compared with the other forms of pelvic abscess. As the result of his experience he comes to the following conclusions:

1. Pelvic cellulitus is an acute form of disease recognized clinically only in the puerperal woman, or in one who has suffered septic infection after a surgical operation on the genital canal.

2. Chronic cellulitus is a misnomer.

3. The occurrence of cellulitis to the extent of forming appreciable exudations in the pelvis is of infrequent occurrence.

4. Cellulitus to an appreciable degree, clinically, often occurs in connection with peritonitis. It is discoverable, on the cadaver, in the shape of small cicatrices, especially in the neighborhood of the tubes and ovaries, between the layers of the broad ligaments, and in the utero-sacral ligaments, and is associated with evidences of extensive peritoneal lesions.

5. When large exudations form in the cellular tissue the great majority undergo resolution. Suppuration is the exception.

6. Pus collections in the pelvic cellular tissue are seldom seen in comparison with other forms of pelvic abscesses.

He insists that all intra-peritoneal abscesses should be approached through the peritoneal cavity by abdominal section, with a view to enucleation and complete removal of the diseased structures which constitute the pus sac, and which if allowed to remain, are liable to cause a recurrence of pelvic disease. He should depreciate all endeavors to reach these abscesses by extra-peritoneal methods; believing, should the complete and thorough radical removal of the diseased tissue be impracticable or attended with too great risk, that drainage through an abdominal incision is safer and is attended with more complete relief than can be obtained by any vaginal operation.

Dr. Charles P. Noble discusses

The Relation of Certain Urinary Conditions to Gynecological Surgery.

He emphasizes especially the following points:

1. The importance of the systematic examination of the urine of gynecological patients, especially of those requiring celiotomy.

2. That the presence of albumin and of casts in the urine need not effect the issue of the operation.

3. That serious and prolonged celiotomies involving much handling of the abdominal viscera, in women having chronic Bright's disease (especially the small contracted kidney), usually terminate fatally.

4. That the prognosis is best when the presence of the albumin and casts in the urine is due to the pressure of an ovarian cyst which can be quickly removed.

The paper includes the report of six cases illustrating the points made by the author.

Dr. Francis Fœrster continues his article the

Comparative Microscopical Studies of the Ovary,

the paper in this issue being devoted to the consideration of the result of ovulation in the ovary. He condenses the results of his investigation as follows:

1. Whereas ovulation followed by pregnancy causes the production of a corpus luteum, which the author has shown to be an endothelia, ovulation without pregnancy will never cause the appearance of a corpus luteum or endothelioma.

2. In the cow, the sow, the ewe, and the guinea-pig the burst Graafian follicle, being first filled with blood, will in turn be filled with myxomatous tissue and be enclosed with a structureless layer, possibly the subepithelial follicular membrane.

3. Not infrequently the structureless layer, perhaps because of an infiltration with a elastic or hyaloid basis substance, is very broad, far in excess of the central myxomatous tissue.

4. Broad follicular membrances cannot be unchanged subsepithelial layers, but must be due to a new formation of tissue from the medullary stage to a more or less perfect infiltration with hyaloid basis substance.

5. In the cat's ovary there are no follicular membranes, but, instead of these, broad layers of endothelia enclosing the central myxomatous tissue.

6. After a certain time the follicular membrane, or the layers similar to it, are, by a retrogressive change, transformed into an indifferent or medullary tissue. This change may take place in the whole follicolar membrane or in portions of it.

7. The central myxomatous tissue is likewise transformed to indifferent or medullary tissue.

8. From the medullary tissue, the outcome of both the follicular wall and the central myxomatous tissue, a new type is developed, known by the term of myxofibrous connective tissue.

9. The myxofibrous tissue in alternate portions falls back to the stage of protoplasmic indifference, and at last gives rise to a dense, delicate, cicatricial connective tissue.

10. The cicatricial fibrous connective tissue remains unchanged throughout life, and is the last remnant of a burst follicle. It may contain apparently structureless vestiges of

the follicular membrane or may be entirely destitute of the latter.

The paper is illustrated with wood cuts of sections of ovaries showing the various conditions spoken of by the author.

Dr. James F. W. Ross contributes a paper on

The Omentum and the Role it Plays in Operative Work upon the Abdomen.

The paper is largely taken up with a discussion of the functions of the omentum and the author is of the opinion that it in some way regulates the amount of fluid in the peritoneal cavity. He also likens it to a man-of-war, ready to sail to any port in which there is impending trouble, from the readiness with which it attaches itself to an inflamed tube or intestine for the purpose of shutting off any purulent collection from the general peritoneal cavity. The author also suggests that it may hold surplus supply of blood during the process of digestion, and that such blood, not being utilized as it is in other parts of the body, such as muscle and the liver and kidneys, deposit fat so frequently found in the omentum.

The various surgical diseases of the organ are also fully considered in the paper.

Dr. Charles Clifford Barrows discusses the

Conservative Surgery of the Uterine Appendage.

The author considers that the Trendelenberg posture has simplified all abdominal work enormously, as by its means we can bring the field of operation into view and by the proper placing of flat sponges or sterilized gauze pads shut off the general peritoneal cavity from any possible infection at the time of operation. Flooding of the cavity of the peritoneum and the use of the drainage tube he considers unnecessary. The author believes that certain cases of pyosalpinx may be successfully treated by amputation of the tube at some distance from the cornu of the uterus, and the formation of an artificial ostium abdominale. In cases of pyosalpinx where the ovary is healthy and the fimbriated end of the tube is not adherent to it, he has amputated the tube at the outer end of the healthy portion of the tube, washed it out, slit it up a short distance, and united its serous and mucous coats by fine catgut sutures thus forming an artificial ostium abdominale.

The author also publishes a table of cases operated on—eighteen cases with no deaths.

[The objection to the Trendelenberg posture in the minds of some operators is the ease with which pus could find its way into the upper part of the abdominal cavity whence it would be difficult to remove it. It is a very significant fact that the most successful operators are in the habit of using the drainage tube and flushing the abdominal cavity in cases where the procedure is warranted by reason of hemorrhage or purulent collections within the pelvis.—Ed.]

Dr. Henry Louis Hayes reports "A Case of Protracted Gestation—Delivery on the Three Hundred and Eighty-ninth Day." The author is of the opinion that these ten grain doses of Quinine were very instrumental in inducing the labor.

Dr. George Wythe Cook discusses the question "Should Marriage be Recommended as a Remedy for Disease in Women?" After reporting a number of cases the author comes to the conclusion that marriage has a tendency to increase the pain of dysmenorrhœa by direct irritation causing excessive hyperæmia, and to aggravate nervous conditions by reflex over stimulation of the nervous system.

The remaining papers in this issue are: "Cavernous Angioma of the Uterus," by Dr. H. J. Bolt; "Report of a Case of Ovarian Tumor Complicated by Encysted Remains of Tubal Gestation on One Side and Calcified Ovary on the Other," by Dr. Marcus Rosenwasser; "A Case of Diffuse Sarcoma of the Mucous Membrane of the Uterus," by Dr. Warren Coleman; and "Poliomyelitis Anterior Acuta Infantilis: Its Ftiology and Treatment," by Dr. Anna M. Galbraith.

THE VIRGINIA MEDICAL MONTHLY

for December. Dr. Charles H. Bushong contributes and article on

Abortion in its Earliest Weeks—Its Treatment.

The author believes that many abortions, particularly where the pregnancy is of only a few weeks, are overlooked and the cessation of the periods attributed to cold or other indiscretions. The possibility of pregnancy should never be overlooked in any case where the patient has missed a week or more over her usual period and then looses an unusual amount of blood. In view of the possible sequences of abortion, its immediate and proper treatment is of the utmost importance. If seen early enough, the first thing to do is to attempt to prevent the abortion and check the tendency to expel the fœtus. This should always be done when possible. When the condition is such that all hope of saving the fœtus has passed, or when the symptoms are dangerous to the mother, everything must be done to expedite its expulsion. For the purpose of preventing the abortion the author advises the use of powdered opium, in pill form, in doses of half a grain to two grains, continued for two or three days in diminishing doses. Where there is considerable hemorrhage and yet reason to believe that the fœtus is living, he advises the use of ergot either with or without hydrastis. He believes the best result will be obtained by the administration of half a minim of the fluid extract of each drug every ten or fifteen minutes for the first few hours. He states that, given in this way, a smaller amount of the drug will be required and there is less liability of the stomach becoming upset. Quinine has, however, been more satisfactory to him than either ergot or hydrastis. It is given in one grain doses of the sulphate every hour until cinchonism is produced or the hemorrhage controlled. Each dose is followed by an

ounce or more of water. Absolute rest is enforced and too frequent examinations of the uterus through the vagina avoided.

If it is decided that the abortion is inevitable the uterus must be emptied of its contents. He rejects the use of the tampon on account of its uncertainty and the danger of pyæmia as the result of retention of some of the fœtal envelopes or the damming back of the blood into the tubes. The patient should be etherized, the cervix dilated if not already sufficiently open, and the contents of the uterus removed by some one of the various forceps made for the purpose. The uterus is then cleansed by means of small pieces of cotton dipped in hot water. Following this, the uterus is swabbed out with carbolic acid diluted one-half with glycerine, and the vagina cleansed thoroughly with cotton dipped in hot water. The patient should remain in bed with light diet for some days. The author finds quinine in five grain doses three times a day useful in puerperal cases. It has replaced ergot entirely in his obstetric practice.

If there is any tendency to pelvic peritonitis, hot vaginal douches must be given. Should the cervix close, an Outerbridge drain is to be introduced. If pelvic peritonitis sets in, it can be allayed by the use of a saturated solution of Epsom salts. Care should be taken to prevent the patient from moving about too soon.

Dr. Russell M. Cunningham presents

Some Recent Observations of Croupous Pneumonia,

with special reference to prophylaxis and treatment. The paper contains the results of the observation of ninety-three cases in one of the convict mines in Alabama. The author presents the following as his views in regard to the disease:

1st. It is a constitutional disease, with a local anatomical sign, consisting of an inflammation of the pulmonary parenchyma, and caused by its own specific materies morbi or germ, probably that of Frankel or Friedlander.

2nd. That the special circumstances under which this germ is evolved and operates are unknown, as we have it under diametrically opposite conditions, both good and bad.

3rd. That the disease, as a rule, prevails endemically, rather epidemically, and still more rarely sporadically.

4. That these endemics differ in type and in extent of pulmonary inflammation, and, consequently, in mortality.

5th. That the disease is severer in public institutions, especially prisons.

6th. That the negro is especially predisposed to the disease, has less capacity to resist it, and, consequently; a larger mortality.

7. That coal-miners, especially negroes, while not predisposed to the disease, are favorable subjects for extensive pulmonary inflammation, and have less capacity to resist the disease, owing to the more or less anthracosis of the pulmonary tissue.

8th. That the mortality is mainly determined by the type of the disease; first, in the primary effect of the germ upon the nervous system; and secondly, the extent of pulmonary inflammation and in the rapidity of its invasion and development.

9th. That the mild, uncomplicated cases, with a fairly good pulse and moderate temperature, and with only one lobe, especially a lower lobe, involved, intrinsically tend to recovery; and that the severe cases, complicated or not, with fast and weak pulse, fast or labored respiration, regardless of temperature and attended by great prostration, intrinsically tend towards death, and without judicious treatment will die, regardless of the extent of pulmonary inflammation; and that in the cases in which the pneumonia is double, particularly if the double invasion is simultaneous, their tending is to a fatal issue; and finally, that in the cases in which the inflammation is universal by a simultaneous or rapidly successive invasion of the entire long structure, death is the inevitable rapid result. Therefore, in comparing statistics, all these things should be taken into account, otherwise they are worthless. Hence the wide divergence in the statistics and difference in treatment of various observers.

10th. That the immediate cause of death in many cases is ante-mortem heart clots.

11th. That the main features of treatment are: (a) to combat the shock of the germ invasion, best done by opium, stimulants, and, in my opinion, hypodermoclysis; (b) to stimulate freely, the best stimulant, as a matter of routine, being whiskey and strychnine, supplemented in extreme cases by tincture strophanthus; (c) to control temperature, the best method being the bath; (d) to prevent, if possible, heart clots, hypodermoclysis, in my opinion, being the most reliable; (e) to meet indications as they arise.

Dr. Charles G. Cannaday discusses "Chronic Endometritis, its Aetiology, Modern Methods in Diagnosis and Treatment," advocating the use of electricity for the cure of the condition.

The remaining papers in this issue are: "Insanity—Its Relation to the Public and Profession," by Dr. R. J. Preston; "The Law of Virginia as to Right of Physicians to Recover their Fees by Suit," by Samuel D. Davies; "Forensic Medicine," by Dr. C. G. Comegys; "The Human Brain—An Appeal to the General Practitioner to give it More Study," by Dr. J. Harrison Hodges; and "Periodical Inebriety," by Dr. T. D. Crothers.

Under Clinical Reports, Dr. Charles P. McMabb presents "A Case of Brain Injury—Compression—With Slight Symptoms at First—Trephining, Recovery;" and Dr. R. H. Garthright reports a "Case of Maternal Impressions."

Syphilis—Children.

The joint affections occurring in children suffering from inherited syphilis may be any of those caused by the acquired disease, which Hutchinson enumerates as follows:

"1. Synovitis during secondary stage.

"2. Perisynovial gummata.

"3. Arthritis due to osseous nodes or gummata in the neighborhood of the joint.

"4. True chronic synovitis.

"5. Syphilitic chrondro-arthritis (of Virchow.")—*British Med. Jour.*

PERISCOPE.

IN CHARGE OF WILLIAM H. BRICKER, M. D., B. SC.

MEDICINE

Nayet on Effects of Inoculation in Animals of Human Cancer and Cancerous Products.

1. Carcinomatous tissue from man macerated in glycerine gives a liquid which injected several times into the bodies of white mice is able to develop a neoplasm evidently cancerous.

2. This result is obtained only after a very long period of incubation and is accompanied by a cachexia which develops suddenly only a little while before death. In one case eleven months intervened between the cachexia and the last inoculation.

3. When the production of the neoplasm does not result, the animal succumbs to a tardy cachexia without any anatomical alteration appreciable to the naked eye.

4. This fatal cachexia also results (though a little more slowly) by one injection sufficiently large, of the glycerine extract (prepared from an epithelioma of the stomach) without macroscopical change.

5. The grafts of human cancerous tissue in the white mouse are absorbed without producing any local or general alteration, at least during the six months which the animal generally survives.

6. Where two distinct cancers have been obtained in the same animal, one must admit that they result from the first injections of the cancerous liquid, for it is irrational to suppose that two cancers shown to be contemporaneous by their equal development can produce themselves spontaneously and simultaneously.

Multiple tumors always grow by dissemination of degenerated elements proceeding from the older and more developed neoplastic focus.—*La France Medicale.*

Prevention of Tuberculosis.

Lawrence F. Flick (*Medical News*) offers a comprehensive scheme of practical measures for the prevention of tuberculosis. 1. Registration of all cases of the disease which have arrived at the breaking down or infectious stage.

2. The education of the public at large and of the people immediately concerned as to the contagious nature of the disease and how to avoid contracting it and how to avoid transmitting it to others.

3. The careful and thorough disinfection of all infected houses, penal and reformatory institution, conveyances and public places.

4. The establishment of special hospitals for the treatment of the poor suffering from the disease.

5. Government inspection and regulation of dairies and slaughter-houses.

6. The enactment of laws and ordinances forbidding practices as a result of which others are liable to be infected.

7. The restriction and regulation of interstate and international emigration of persons suffering from the disease.

8. The retirement of all tuberculous patients in the infectious stage from occupations in which they can infect others and the pensioning of those who cannot be maintained in hospitals.

Foot and Mouth Disease in Man.

A fatal case of glossitis is recorded by Dr. Rose of Berlin. It occured in a man of 50, who was admitted to the hospital with great œdema of the tongue and albuminuria. Notwithstanding diminution in size of the tongue, death occurred on the fourth day. *Post-mortem* examination revealed no œdema of the glottis nor infarct in the lung. There was venous stasis in the meninges. The liver was icteric and fatty. Cocci were cultivated from the kidney similar to those found by Siegel in foot-and-mouth disease. Dr. Siegel said that the case plainly belonged to the category of diseases of the tongue such as he, the speaker, had repeatedly observed during the last few years, In human foot-and-mouth disease the tongue was always swollen, but he had only observed six cases similar to the one described. Two cases like the one mentioned died with symptoms of general septicæmia; three recovered without any special consequences; one man was the subject of very remarkable changes. Of the tongue only a stump remained, movable with difficulty; the remainder had necrosed and fallen off. In 1891 he had first published a work on cases of human root-and-mouth disease reminding one of scurvy. There were blisters on the tongue, and mucous membrane of the cheeks, lips and nose. The patient couplained of attacks of giddiness, and pain in the stomach and liver. The general appearances were those of a typhoid disease, with low atypical fever of very prolonged duration and high mortality. In a series of necropsies he had always found the same bacterium in all the organs, but especially in the kidneys and liver. Inoculation of animals remained for a long time without any result; but when pigs and calves were inoculated, vesicles appeared on the mouth, declared by experts to be foot-and-mouth disease. The same organisms were found in the organs of these animals. When the disease was conveyed to man, the symptoms would vary greatly with the degree of virulence. He observed an epidemic of the disease in 1892, affecting children and adults in equal proportions. Out of 192 severe cases, 16 died, equal to 8.5 per cent. In May and June of the present year there was a slight outbreak of the disease. In four necropsies the same bacteria was found as in other cases. A peculiar localization of the vesicles was that on the breasts of suckling women

and the prepuces of men and boys. The disease might therefore be mistaken for syphilis. In one case the vesicles formed on the conjunctiva and cornea, with very unfavorable prognosis. The vesicles on the soft palate and tonsils might easily be mistaken for diphtheria. In many cases an exanthem like that of measles or scarlatina was spread over the whole body; in these instances the low temperature was an indication of the nature of the disease. As regarded treatment, salicylate of sodium showed a distinctly specific activity, and the litho-salicylate of sodium produced the same beneficial effects.—*The Med. Press and Circular.*

Actinomycosis Cured by Potassium Iodide.

Dr. Meunier, communicated to the *Paris Academy of Medicine*, the history of a case of actinomycosis in man, the seventh on record in France, but the first treated and cured by the iodide of potash. The patient was a railroad engineer who had never lived in the country, and given the frequency of animal actinomycosis in Touraine, the disease must have been of alimentary origin. A cervical phlegmon first appeared, of greater consistency and hardness than are found in the ordinary phlegmons, and to which he proposes to apply the name of cervical actinomycotic pseudo phlegmon.

The results of the treatment by the iodide were so satisfactory that the author is tempted, after Thomassen, to consider potassium iodide as a specific in the treatment of the disease.

The Use of Cocaine in Small-Pox.

Dr. Samayoa, (*La Escuela de Medicina of Guatemala*; *Pacific Med*) after using this alkaloid in several cases of small-pox, states his results as follows.

1. Cocaine given continuously from the beginning can completely abort the disease.
2. If given after the eruption has appeard, it will transform confluent or hemorrhagic forms into the discrete.
3. Sometimes when the cocaine is given from the beginning of the disease, the eruption assumes a *corneal aspect*, and the pustules collapse before the usual time.
4. Cocaine prevents suppuration, hence there is no secondary fever, and no pitting.
5. To obtain these results it is necessary to give cocaine as soon as the initial symptoms appear, *and must be continued, without interruption.*
6. The best preparation is the hydrochlorate, and should be continued five or six days or even nine if necessary.

Heart Failure.

In an article by Dr. J. W. Maddin, Nashville *Jour. of Med. and Surg.* the following conclusions are arrived at:

"Whatever produces unhealthy structures of nerve fibre, nerve cells, or nerve ganglia, or the tissue to which they are distributed and upon which they act, preventing normal impulses, which regulate automatic and reflex movement, such causes as reside in errors of healthy sanguification producing degeneration of tissue, especially heart tissue, or tissue of blood vessels which nourish the heart, are potent factors of heart failure.

Whatever stimuli, mechanical tumors, abnormal elements of the blood, chemical poisons, or other causes which produce pressure or undue irritation upon nerve tracts, nerve cells or ganglia of the heart, impairing healthy metabolism and normal impulse, are causes of heart failure.

High temperature of the atmosphere, combined with conditions predisposing to sunstroke from without the body, or high temperature of the body from fevers, producing *heat stroke* from within, paralyzing sympathetic and vaso-motor power, determining blood flow to the cavities of the body, and giving full play to the inhibiting power of the vagus, will slow, still and stop the heart action.

Finally, whatever of the natare of shock, whether from a blow without the body, or equally, through a subtle blow to the emotional nerve centers of the brain, whether through grief or fear, or anger, or other emotion which produces molecular change in the axilla cylinder of nerves leading from end organs of the body or from emotional brain centers through the medulla oblongata where these fibres cerebral, vaso-motor, sympathetic, and inhibitory—commingle will by parlaysis produce that most sudden, irremediable and quickly fatal of all heart failures."

A Case of Diffuse of Gangrene of the Left Lung.

The patient was a school boy aged ten years, and the accident occuring during the operation of excision of the left knee-joint, and the removal of a sequestrum from the femur The pulmonary symptoms appeared two days after the operation, and died sixteen days after the operation.

The post-mortem examination showed the presence of a diffuse gangrene of the left lung due to the presence of a temporary molar tooth, which was supposed to have got into the bronchus when the patient was under the chloro form at the time of the operation on the knee-joint and femur.

Treatment of Asthma.

Prof. Dieulafoy (*Gaceta Med. Catalana*) treats asthma as follows:

1. If the attack is just coming on, he applies the following to the interior of the nasal cavity:

℞ Cocain. Muriat..... 15 grains.
Aquae Destillat..... 5 drachms.

Or this solution may be applied to the nasal cavity or throat by means of a spray, a teaspoonful being thrown in in four or five minutes. If this does not suffice, six to twelve drops of pyridin may be inhaled from a handkerchief, or one fluid drachm may be poured upon a cloth and kept near the patient's chair. Stramonium leaves and nitrated paper may be stuffed into a large pipe in alternate layers and smoked, if the attack is well under way. If the attack is at its height, then one may inject half a hypodermic syringeful of—

℞ Morphin Mur..... 1½ grains.
Aquae Distillat..... 2½ drachms.

This usually has a sedative influence. Repeat in a quarter of an hour, if necessary.

2. In the intervals administer the iodide of potash, twenty-two to thirty grains daily, commencing with four grains a day, and increasing the dose to fifteen, twenty-two, or even thirty grains if the asthma be of long duration.

3. If the disease be of diasthetic origin give during fifteen days fifteen to thirty grains of the iodide of potash, to follow with fifteen days belladonna:

℞ Pulv. Folior. Belladonnae..... 3 grains.
Extract Belladonnae..... 3 grains.

Sufficient for twenty pills. Commence with one-half a pill, increasing to one pill a day.

At the same time prescribe:

℞ Sodii Arseniat..... 1 grain.
Aquae Destillat..... 2½ ounces.

This treatment should be continued three to six months.

4. If there be emphysema, inhalations of compressed air.

Residence in mountainous and elevated countries should be avoided. Strong odors are among the exciting causes.

ARMY AND NAVY.

U. S. ARMY, FROM DECEMBER 10, 1893, TO DECEMBER 19, 1893.

First Lieutenant John S. Kulp Assistant Surgeon, now on temporary duty at Jackson Park, Chicago, Illinois, is relieved from further duty at Columbus Barracks, Ohio, and when his services, are no longer needed with the troops at Jackson Park, will report in person to the Commanding Officer Fort Sheridan, Illinois, for duty at that post.

First Lieutenant Madison M. Brewer, Assistant Surgeon, having relinguished the unexpired portion of his sick leave of absence will report in person to the Commanding Officer, Fort Monroe, Virginia, for temporary duty at that post.

Leave of absence for four months, to take effect about January 6, 1894, with permission to go beyond Sea is granted Major Alfred C. Girard, Surgeon U. S. Army.

NEWS AND MISCELLANY.

International Medical Congress.

The undersigned Chairman of the American National Committee of the Eleventh International Medical Congress has received the following communications from the Secretary General:

First. Papers to be read in any of the Sections of the Congress should be announced on or before January 31st, 1894, to the Secretary General, Prof. E. Maragliano, Ospedale Pammatone, Genova, Italy.

Second. The title of the paper ought to be accompanied with a brief abstract of its contents and conslusions.

Third. The programme to be distributed will contain the titles of all the papers announced before August 31st, 1893, and since.

Fourth. The reductions granted by the Railway Companies months ago will be available from March 1st to April 30th, 1894.

In the interest of such medical men as will sail for Europe before official cards will have been received from the General Committee, the undersigned proposes to supply in as official a form as he thinks he is justified in doing, credentials which are expected to be of some practical value. It is suggested, besides, that a passport may increase the traveler's facilities.

Very respectfully,
A. JACOBI, M. D.
110 W. 34th Street, New York,
Dec. 10th, 1803.

Reduced Rates for the Holidays.

In pursuance of its liberal policy, the Baltimore and Ohio Railroad Company announces that excursion tickets will be sold between all stations on its lines east of the Ohio River during the Christmas and New Year holidays at reduced rates. The tickets will be sold for all trains December 23, 24, 25, 30, 31 and January 1, and will be valid for the return journey on all trains until January 3 inclusive.

Through Cars to New Orleans.

Among the many important improvements in the Baltimore and Ohio Railroad train service is the addition of through pullman Sleeping Cars from New York to New Orleans, via Philadelphia, Baltimore, Washington, and the famous Shenandoah Valley route, passing through Roanoke, Knoxville, Chattanooga and Birmingham. The train leaves New York daily at 5.00 P. M.; Philadelphia, 12th and Market Sts., 7.22 P. M and 24th and Chestnut Sts. 7.38 P. M., reaching Roanoke at 7.50 A. M.; Knoxville, 3.52 P. M., and New Orleans, 12.45 P. M.

This train is very handsomely appointed, being vestibuted throughout, and has Dining Car service New York to Chattanooga. At Washington a Pullman Sleeping Car, which runs through to Memphis, is added to the train.